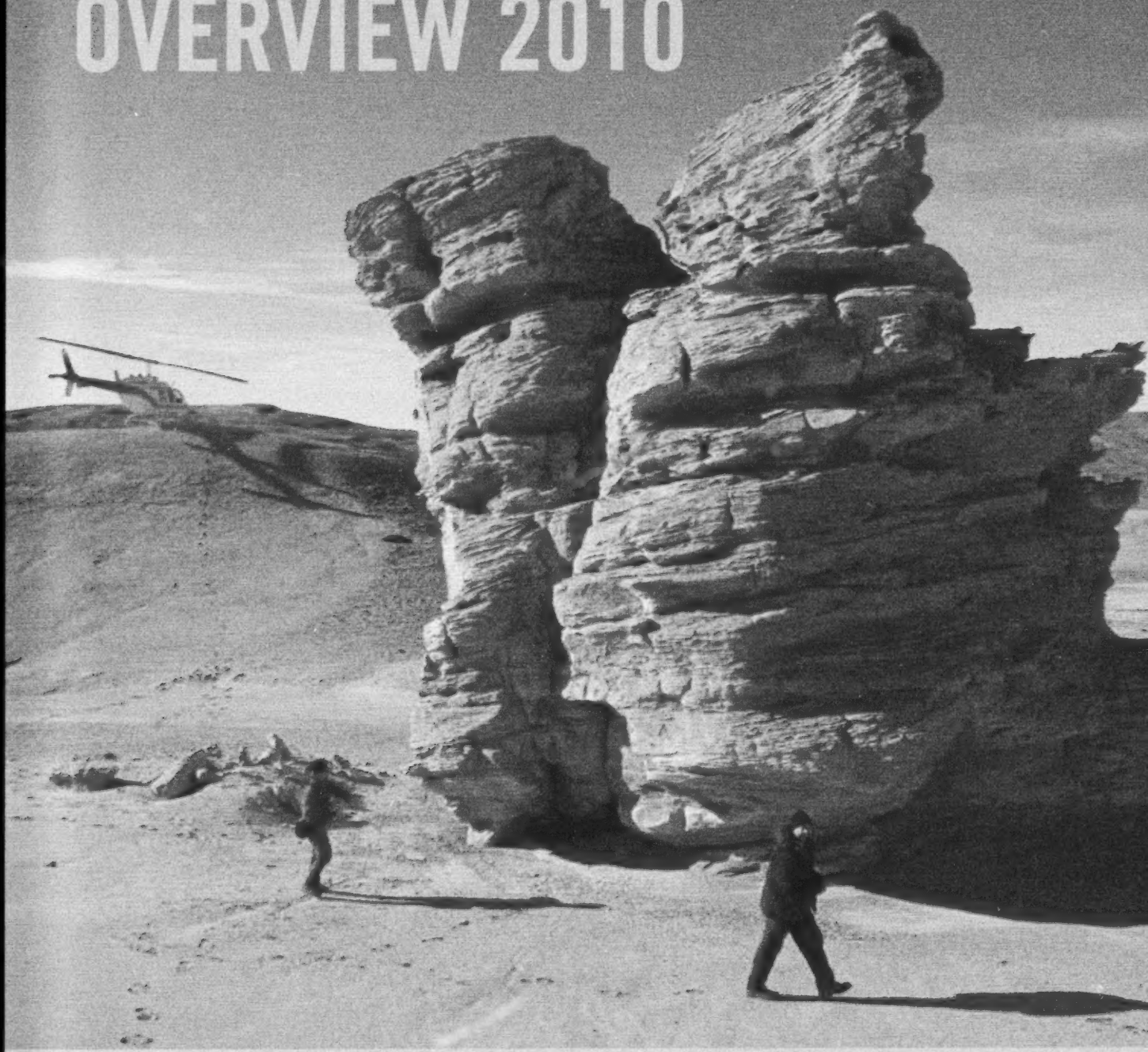
NUNAVUT

MINERAL EXPLORATION, MINING & GEOSCIENCE OVERVIEW 2010



Nunavut

Indian and Northern Affairs Canada

Affaires indiennes et du Nord Canada

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Aniguq River near Baker Lake
Courtesy of TBC

ABOUT THE NUNAVUT: MINING, MINERAL EXPLORATION AND GEOSCIENCE OVERVIEW 2010

This exploration overview is a combined effort of four partners: Indian and Northern Affairs Canada (INAC), Government of Nunavut (GN), Nunavut Tunngavik Incorporated (NTI) and Canada-Nunavut Geoscience Office (CNGO). The intent of this publication is to capture information on exploration and mining activities in 2010 and to make this information available to the public.

We thank the many contributors who submitted data and photos for this edition. Prospectors and mining companies are welcome to submit information on their programs for inclusion in the next Overview. Feedback and comments are appreciated.

NOTE TO READERS

This document has been prepared on the basis of information available at the time of writing. All resource and reserve figures quoted in this publication are derived from company news releases, websites and technical reports filed with SEDAR (www.sedar.com). Readers are directed to individual company websites for details on the reporting standards used. The authors make no warranty of any kind with respect to the content and accept no liability, either incidental, consequential, financial or otherwise, arising from the use of this document.

All exploration information was gathered prior to December 2010. A project's status (active versus inactive) in this publication was determined by several factors, including: information publicly available (e.g., corporate presentations, press releases, ftp sites such as those of the Nunavut Impact Review Board (NIRB) and the Nunavut Water Board (NWB)), active mineral tenure as shown on SidViewer, and valid Land Use Permits and Water Licenses as issued by INAC and NWB, respectively.

With reference to the use of the term *National Instrument 43-101 (NI 43-101)*: This is an industry standard outlining rules and guidelines for reporting and disclosing scientific and technical information about mineral projects. This standard is supervised by the Canadian Securities Administrators.

ACKNOWLEDGEMENTS

The 2010 Exploration Overview was written by Karen Costello (INAC), Andrew Fagan (consultant) and Matthew Senkow (INAC), with contributions from David Mate and colleagues at CNGO, Keith Morrison (NTI) and Eric Prosh (GN).

Cover photo: Hoodoos in the Cretaceous Isachsen Formation, Ellef Ringnes Island. Courtesy Geological Survey of Canada. Photo by Derrick Midwinter, Dalhousie University

LAND TENURE IN NUNAVUT

The territory of Nunavut was created in April 1999 as a result of the Nunavut Land Claims Agreement (NLCA), the largest Aboriginal land settlement in Canadian history. Spanning two million kilometres (km), the territory has 25 communities and approximately 30,000 people. Inuit represent 85 per cent of Nunavut's population, creating the foundation of the territory's culture and values. This culture is inherently connected to the land, shaping government, business and day-to-day life.

In addition to the creation of the territory, the NLCA gave Inuit fee simple title to 356,000 square kilometres (km^2) of land. There are 944 parcels of Inuit Owned Lands (IOL) where Inuit hold surface title only (surface IOL). The Government of Canada or "the Crown" retains the mineral rights to these lands. Inuit also hold fee simple title – including mineral rights – to 150 parcels of IOL (subsurface IOL), which total 38,000 km^2 and represent approximately two per cent of the territory. Surface title to all IOL is held in each region by one of the three Regional Inuit Associations (RIAs) while subsurface title to subsurface IOL is held and administered by Nunavut Tunngavik Inc. (NTI). NTI issues rights to explore and mine through its own mineral tenure regime. For both surface and subsurface IOL, access to the land must be obtained from the appropriate RIA.

The Crown administers mineral rights to 98 per cent of Nunavut. INAC manages these rights through the *Northwest Territories and Nunavut Mining Regulations* (NTNMRs). Land use permits for activities on Crown land are issued by INAC under the *Territorial Land Use Regulations* (TLUR).

Significantly, the NLCA is a final settlement whereby all land claims in Nunavut have been settled with the Inuit of Nunavut, thus providing an unmatched level of land tenure certainty.

For more information on the location of IOL and Crown land in the territory, refer to the Nunavut Mineral Exploration, Mining and Geoscience Active Projects 2010 Map.

Number of Mineral and Exploration Properties in Good Standing – NWT and Nunavut

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Permits – Nunavut	146	343	464	1,875	2,267	1,395	1,057	1,034	394	477
Claims – Nunavut	3,010	6,008	7,560	10,138	9,644	6,707	7,905	7,770	7,613	7,178
Leases – Nunavut	271	270	263	271	332	352	354	412	590	631

Who is doing the work? Source NRCan's bi-annual Mineral Exploration Statistics, as of October 2010

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Juniors (Millions $)	13.9	32.7	40.1	31.7	48.5	107.9	132.5	161.8	237.4	261.4	67.9	119.6
Seniors (Millions $)	23.5	29.4	21.2	44.2	44.2	79.6	46.2	48.8	100.6	171.2	107.7	161

Old claim post

Courtesy Shear Minerals Ltd.

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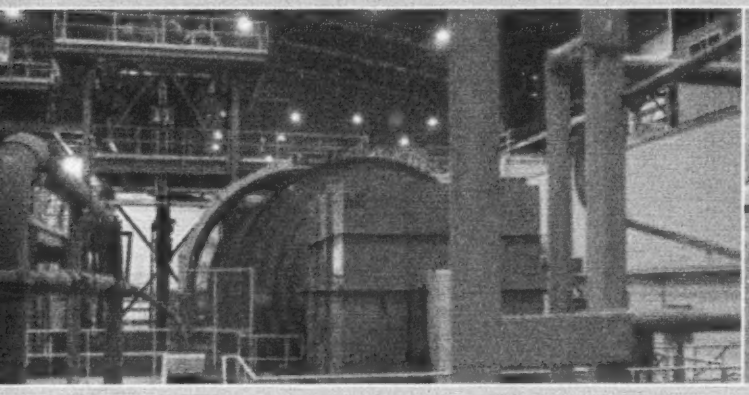


Ball mill within Meadowbank mill

Accommodation barge, Doris gold project

In Nunavut, Indian and Northern Affairs Canada's (INAC) mandate is broad, and includes the stewardship of Crown land and natural resources, and northern governance. In 2010, a number of legislative and regulatory improvement initiatives were set into motion, in response to the concerns and issues raised by northerners and those doing work in the north.

The 2010 federal budget earmarked $19 million for the *Action Plan to Improve Northern Regulatory Regimes*. Announced in May 2010, the Action Plan supports regulatory improvement initiatives in Nunavut, Northwest Territories and Yukon while promoting the objectives of *Canada's Northern Strategy*. It contains three key elements: legislative changes to improve Northern regulatory processes to reduce overlap and duplication; enhanced environmental stewardship; and a strong voice for Aboriginal peoples.

Under this plan, Bill C-25, the proposed Nunavut Planning and Project Assessment Act, focuses on the land use planning and environmental assessment processes in the territory. The proposed Act builds on work started in 2002 by the Nunavut Legislative Working Group, a collaboration of partners in the territory's co-management system. The proposed Act will offer proponents and environmental assessment practitioners alike more clarity, predictability, consistency and legal certainty in the project review and assessment process. It is also expected to promote investor confidence and economic development in Nunavut.

This year's budget also provided $8 million to bolster environmental monitoring in Nunavut through Nunavut General Monitoring Plan (NGMP). Article 12.7.6 of the NLCA sets out the requirement for a plan to monitor current and cumulative impacts of projects. In recent years, INAC has worked closely with the Nunavut Planning Commission (NPC), the Government of Nunavut (GN) and Nunavut Tunngavik Incorporated (NTI) to set the groundwork for NGMP.

Budget 2010 funding will help bring NGMP to the next level, beginning with the creation of the NGMP Secretariat, as well as initiatives to create common data monitoring practices and the development of a basic monitoring system. In the end, NGMP will be a tool used by industry, regulators, scientists and Nunavummiut to monitor the state of Nunavut's socio-economic and eco-systemic conditions. It will also serve as an excellent example of the success that can be achieved through the collaboration of all parties to implement aspects of the NLCA.

Exploration and development in Nunavut was strong in 2010, and INAC continued its role as an advocate for sustainable mineral development in the territory. It does this through its land administration, water management, environmental management, mineral development and field operations responsibilities. For example, this year INAC:

- Completed 197 land and water inspections of exploration camps, mines and research camps, as well as communities, outpost camps and other commercial land leases.
- Issued 277 prospecting permits through the Nunavut Mining Recorders Office in February 2010.
- Participated in four major project environmental assessment reviews, as well as 45 environmental assessments for smaller projects.
- Continued development of the new *Nunavut Water Regulations*, in conjunction with territorial partners such as the Nunavut Water Board (NWB), the GN, NTI and others.

It is estimated that more than $280 million has been spent on exploration and development in 2010 – with several major projects seeing substantial advancement. Nunavut once again became a mineral producing jurisdiction with the opening of Agnico-Eagle Mines Ltd.'s Meadowbank Gold Mine near Baker Lake this past February.

At the time of writing, the Part 5 environmental review of Areva Resources Canada's Kiggavik Uranium Project continues, and INAC is administering participant funding to intervener groups taking part in the process. In November, INAC completed a Mineral Development Advisory Group (MDAG) meeting with Newmont Mining Corporation in advance of its new plans for the Doris North/Hope Bay Gold Project. The department awaits the Draft Environmental Impact Statement for Baffinland Iron Mines Corporation's Mary River Iron Project, which is expected in the coming months.

Slinging core from drill on Aberdeen property
Courtesy of INAC

INDIAN AND NORTHERN AFFAIRS CANADA

Nunavut Regional Office
PO Box 2200, Building 918
Iqaluit, NU X0A 0H0
867 975 4500
867 975 4276

STAFF CONTACTS

Mineral Resources
Karen Costello, Manager
867 975 4290
karen.costello@inac.gc.ca

Matthew Senkow, District Geologist
867 975 4291
geokitikmeot@inac.gc.ca

Archives Orders or Inquiries
867 975 4276
nunavutarchives@inac.gc.ca

General Inquiries
867 975 4276
nunavutminerals@inac.gc.ca

Land Administration
Jeff Mercer, Manager
867 975 4280
landsmining@inac.gc.ca

Mining Recorder's Office
Becky Leighfield, Mining Recorder
867 975 4281
867 975 4286
landsmining@inac.gc.ca

Water Resources
Lou-Ann Cornacchio, Manager
867 975 4550
nunavutwaters@inac.gc.ca

Environment
Margaux Brisco, Acting Manager
867 975 4567
nunavutenvironment@inac.gc.ca

Field Operations (Inspections)
Peter Kusugak, Manager
867 975 4295
peter.kusugak@inac.gc.ca

www.inac-ainc.gc.ca/nunavut

The Government of Nunavut (GN), through the Department of Economic Development and Transportation (EDT), supports a strong and diversified minerals industry based on best practices of sustainable development, and partnership between Nunavummiut and industry. A number of quality discoveries have been made in Nunavut, and there will be substantial opportunities to be realized in the territory as exploration continues and as more projects evolve into producing mines. EDT is working to ensure that all Nunavummiut benefit from these opportunities, and that they have the option to become full participants in development in the territory.

EDT is committed to working with its partners in NTI and the Government of Canada to make the legislative, policy and regulatory environment of Nunavut efficient, internationally competitive and attractive to investors. Significant investment in the territory by major, multinational mining companies is a strong vote of confidence in Nunavut's mineral potential, its regulatory system, and the commitment of its people.

The department has its headquarters in Iqaluit; regional offices in Kugluktuk, Rankin Inlet, Pond Inlet and Pangnirtung; and Resident Geologist Offices in Arviat and Cambridge Bay.

PARNAUTIT: THE NUNAVUT MINERAL EXPLORATION AND MINING STRATEGY

To maintain Nunavut's position as a jurisdiction of choice for mineral investment, the GN developed *Parnautit: The Nunavut Mineral Exploration & Mining Strategy*, which provides a framework of policies and actions to encourage mineral discovery and development. The goal of *Parnautit* is: "To create the conditions for a strong and sustainable minerals industry that contributes to a high and sustainable quality of life for all Nunavummiut." The strategy addresses Nunavut's regulatory and taxation regimes, workforce training, infrastructure development and environmental baseline availability.

The GN remains strongly committed to public geoscience as a means of encouraging new exploration opportunities. The GN provides core funding to the Canada-Nunavut Geoscience Office (CNGO), and direct program support of CNGO's territorial mapping and research projects.

DEVELOPMENT PARTNERSHIP AGREEMENTS

The Development Partnership Agreement (DPA) program was introduced in 2006 as a means of extending the territorial off-road fuel tax credit (rebate) to developing and producing mines. Through a DPA, the GN and the operator work cooperatively in such areas as education and training, socioeconomic monitoring and mitigation, and infrastructure development. As the physical and economic circumstances of no two mines are alike, so too each DPA reflects the unique and shared needs of the mine operator and the local population. Proponents entering the regulatory phase are encouraged to begin negotiations with the GN on a DPA for their projects.

NUNAVUT PROSPECTORS' PROGRAM (NPP) AND PROSPECTOR TRAINING

EDT provides technical and financial assistance to Nunavummiut with demonstrated prospecting skills to carry out their own prospecting projects. The program has been in existence since 1999, and up to $8,000 in annual financial assistance is available for each prospector. In 2010, 18 community-based projects were funded in all regions of the territory.

Every year, EDT geologists present a six-day Introductory Prospecting Course to interested residents in communities throughout the territory. Since 2000, the course has had well over 800 graduates from across the territory. Course graduates often apply for NPP funding to start their own prospecting programs, and many work as field assistants on mineral exploration projects. In 2010, the prospector course was held in six Nunavut communities: Sanikiluaq, Repulse Bay, Chesterfield Inlet, Coral Harbour, Hall Beach and Whale Cove.

Abandoned Nasamiqak carving stone quarry, George Bay, east of Repulse Bay

Early Proterozoic carbonate (dolomite) beds, near Sanikiluaq
Courtesy of GN, EDT

CARVING STONE DEPOSIT EVALUATION

In 2010, EDT geological and technical staff began work on a multi-year deposit/commodity study of carving stone localities, on behalf of the carving industry and communities of Nunavut. The intent is to examine and document carving stone sites for artisanal suitability and supply. The information will include site-specific artisanal, spatial, geographical, geological and photographic data, to be distributed via an interactive web database. Site materials were collected for archival, analytical and demonstrative purposes. Work is supported by CanNor and department funding.

Five communities in the Kivalliq Region were consulted prior to summer 2010 fieldwork. A team of local carvers, project carver and resident geologist visited 25 designated sites by helicopter. The Kovic Deposit, an untouched major resource of serpentine, was confirmed at some distance inland from Repulse Bay. The Paniyuk Dyke, an undeveloped deposit of modest size, was confirmed near Coral Harbour. Smaller occurrences used by Chesterfield Inlet (Iqalukpilinnaaq at Cross Bay), Whale Cove (Akutjuaq at Nevill Bay) and Arviat (Nabbaat at Kaminak Lake) are nearly depleted.

The objective of this four-year, territory-wide project, is to address source-material requirements for many communities, and provide impetus for the study, discovery and exploitation of new carving stone deposits.

MINERALS EDUCATION AND TRAINING

EDT works with many other stakeholders, including the Department of Education, the Government of Canada, and the mining and exploration industries in a number of programs designed to inform Nunavummiut of all ages of the opportunities in the minerals industries. EDT programs and initiatives include the Nunavut High School Math and Science Awards Program, which recognizes accomplishment by students in Grades 8, 10 and 12; the Independent Science Program for Youth (I-SPY) to support science-education camps and activities throughout Nunavut; the Mineral Exploration Field Assistant's Course (offered by Nunavut Arctic College); curriculum development for Nunavut schools; and "Careers in Mining" school and community presentations.

MINERALS & PETROLEUM RESOURCES DIVISION

Headquarters (Iqaluit)
Eric Prosh, Director
867 975 7827
eprosh@gov.nu.ca

Dianne Lapierre, Manager, Environmental Assessment & Regulation
867 975 7803
dlapierre1@gov.nu.ca

Peter Frampton, Senior Petroleum Advisor
867 975 7842
pframpton@gov.nu.ca

Arviat Office
arviatresidentgeologist@gov.nu.ca

Mike Beauregard, Resident Geologist
867 857 2297
mbeauregard@gov.nu.ca

Ronald Suluk, Community Mining Advisor
867 857 2298
rsuluk@gov.nu.ca

Elisapee Karetak, Mine Training Coordinator
867 857 2376
ekaretak@gov.nu.ca

Cambridge Bay Office
cambayresidentgeologist@gov.nu.ca

Hugh MacIsaac, Resident Geologist
867 983 4224
hmacisaac@gov.nu.ca

Jared Fraser, GIS Specialist
867 983 4160
jfraser2@gov.nu.ca

www.edt.gov.nu.ca

Nunavut Tunngavik Incorporated (NTI) is the Inuit corporation responsible for overseeing implementation of the Nunavut Land Claims Agreement (NLCA). NTI's mandate includes safeguarding, administering and advancing the rights and benefits of the Inuit of Nunavut to promote their economic, social and cultural well-being through succeeding generations. The Lands and Resources Department of NTI is responsible for the implementation of Inuit responsibilities related to the management of Inuit Owned Lands (IOL), the environment, minerals, oil and gas, and marine areas.

NTI issues mineral rights through a negotiated Exploration Agreement (EA) that provides a holder the right, if it meets the terms of the EA, to receive a Mineral Production Lease (MPL) that allows for mining a discovered resource.

NTI has in place a system that does not require staking when applying for an Exploration Agreement. The applicant must submit to NTI an Expression of Interest which includes a map of the proposed exploration area (form available upon request from NTI). Expressions of Interest and subsequent correspondence and negotiation are kept confidential with NTI and the applicable Regional Inuit Association (RIA) until required to be made public, typically upon signing of a Memorandum of Understanding between NTI and the applicant outlining the agreed terms upon which the Exploration Agreement will be developed.

It should be noted that although the process and documents described here normally apply, NTI, as a private organization, has complete discretion as to whether it will issue an Exploration Agreement (or other agreement), what the process will be for obtaining an agreement, and what the terms of the agreement will be. The terms may include, for example, NTI holding a direct interest in a project or seeking additional benefits such as shares or milestone payments.

Under the standard terms, successful applicants, upon executing the new Exploration Agreement and submitting the first year's annual fees, will be granted the exclusive right to explore for minerals on the Exploration Area. In order to gain access to the land, however, the applicant must obtain a surface right issued by the RIA.

Holders of exploration agreements are required to submit annual exploration work reports to NTI that remain confidential for a period of up to three years.

NTI URANIUM, MINING AND RECLAMATION POLICIES

NTI has developed a series of policies applicable to exploration and mining, specifically a general Mining Policy, a Uranium Policy, and a Reclamation Policy. The policies provide that NTI will support exploration and mining provided there are minimal negative environmental and socioeconomic impacts; that Inuit cultural and social needs are respected; that investment in Nunavut is encouraged; that land-use conflicts are resolved equitably; and that Inuit economic opportunities are maximized. The texts of all the policies are available from NTI.

MILESTONES IN INUIT MINERAL RIGHTS

1993: Inuit receive ownership of minerals covering approximately 38,000 square kilometres (km^2) of Nunavut (1.8% of the territory). The first issuance of rights under Concession Agreements are made.

1997: NTI adopts its Mining Policy.

1999: Creation of the new territory of Nunavut.

1999-2000: NTI updates its mineral administration to eliminate ground staking in favour of map selection, and the replacement of concession agreements with exploration agreements.

2003: NTI and Strongbow Resources negotiate an Exploration Agreement in which NTI has the opportunity to participate in any mine developed through a joint venture arrangement. This is the first agreement in which NTI has negotiated an enhanced partnership.

2007: NTI adopts the Uranium Policy.

2008: NTI and Kivalliq Energy negotiate the first Exploration Agreement in which NTI issues the right to explore for and mine uranium and thorium.

2008: NTI adopts the Reclamation Policy.

2010: Agnico-Eagle's Meadowbank mine becomes the first mine operating on Inuit Owned Lands. For the first time all royalties collected from a mine will flow directly to Inuit.

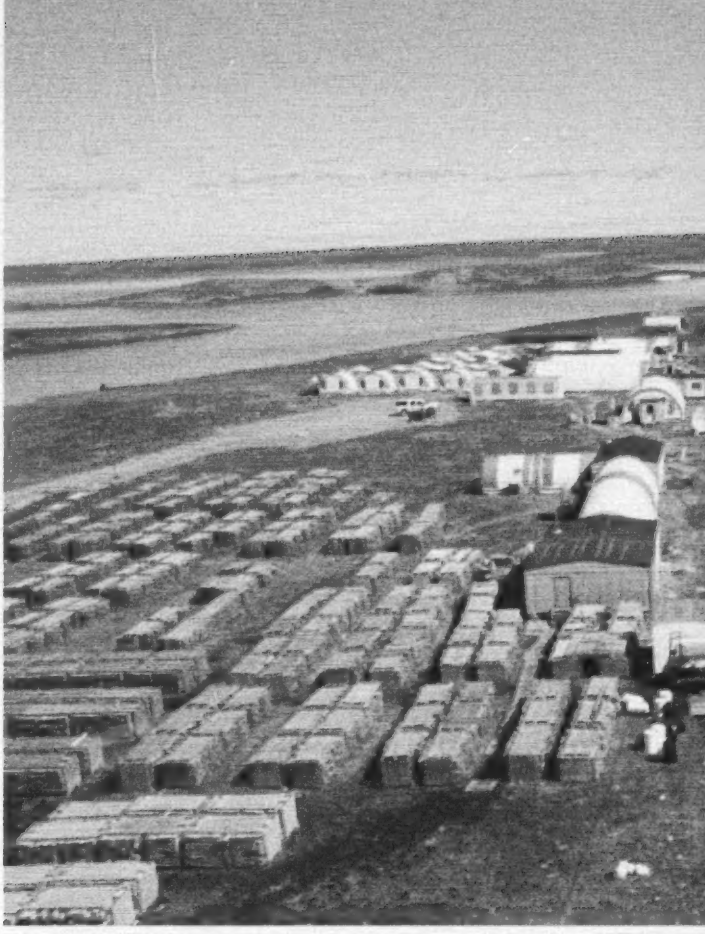
PROJECTS ON INUIT OWNED LANDS

Many of the advanced exploration projects in Nunavut fall on subsurface IOL. The following table summarizes the current active Exploration Agreements and their locations.

Project/Deposit	Holder(s)
Qikiqtaaluk Region	
Piling Project[1]	Commander Resources Ltd.
Mary River	Baffinland Iron Mines Corporation
Belcher Islands	McKinnon Prospecting Ltd.
Kivalliq Region	
Meliadine	Agnico-Eagle Mines Ltd.
Meadowbank[2]	Agnico-Eagle Mines Ltd.
Ukalik	Forum Uranium Corp.
Sedna	4579 Nunavut Ltd.
Cache	Full Metal Minerals
Lac Cinquante	Kivalliq Energy Corporation
Peter Lake	Glen Dickson Group
Kitikmeot Region	
Hope Bay[3]	Hope Bay Mining Ltd.
Contwoyto	Shear Minerals, Golden River Resources
Hood River	Shear Minerals, Golden River Resources
High Lake[4]	MMG Resources Inc. (MMG)
Muskox[5]	Adriana Resources
Arcadia Bay	Full Metal Minerals
Rockinghorse[6]	Golden River Resources
Strongbow	North Arrow Minerals Inc.

Note: All projects referenced above are discussed in this report.

1. Overall project involves Crown land and subsurface IOL.
2. The project involves land held under NTI exploration agreements as well as grandfathered claims and leases.
3. The project involves land held under NTI exploration agreements and grandfathered leases.
4. The Boston deposit is located on surface IOL, while the Doris, Madrid, South Patch, Naartok and Suluk are on subsurface IOL, distributed among grandfathered leases and NTI exploration agreements. Potential extension of the Boston deposit down-dip or along strike to the north will also be on subsurface IOL.
5. The project involves Crown land and land held under NTI exploration agreements and grandfathered leases.
6. The project involves Crown land, surface IOL, and subsurface IOL under NTI exploration agreements.
7. The project involves Crown land, surface IOL, and subsurface IOL under NTI exploration agreements.



Meliadine camp and core storage
Courtesy of TEC

NTI LANDS MINERALS, OIL AND GAS

PO Box 1269
Cambridge Bay, NU X0B 0C0
867 983 5600
867 983 5624

Carson Gillis, Director of Lands and Resources
cgillis@tunngavik.com

Keith Morrison, Senior Advisor – Minerals, Oil and Gas
kmorrison@tunngavik.com

Jorgan Aitaok, Manager Mineral Agreements and Promotion
jaitok@tunngavik.com

www.tunngavik.com

Development of Nunavut's mineral and energy resources, and the infrastructure required to service mining, exploration and communities, will form an important foundation for the territory's economy and offer Nunavummiut significant opportunities for prolonged economic and social development. The Canada-Nunavut Geoscience Office (CNGO) was established in 1999 to help foster this development. It is a partnership between Natural Resources Canada (NRCan), Indian and Northern Affairs Canada (INAC), and the Government of Nunavut's (GN) Department of Economic Development and Transportation (EDT). Nunavut Tunngavik Incorporated (NTI) is an ex-officio member of the office.

The mandate of CNGO is to provide geoscience information and expertise that supports responsible resource exploration and development, geoscience capacity building, education and training and geoscience awareness and outreach. CNGO concentrates on new geoscience mapping and research, disseminating geoscience information and developing collaborative partnerships of strategic importance to Nunavut.

In 2010, CNGO participated in a range of geoscience initiatives. These included:

MINERAL DISTRICT AND MINERAL DEPOSIT STUDIES

Elu Greenstone Belt, Northeast (NE) Slave Province

H. Mvondo and D. Lentz (University of New Brunswick)

The Elu greenstone belt (EB), in the northeast Archean Slave Craton, is underexplored as compared to the neighbouring Hope Bay greenstone belt (HBB) which contains important gold deposits. The Elu Link between the two belts provides insights into related mineralization and controlling geological processes that could be used to build a comprehensive genetic model and enhance exploration in specific domains of greenstone belts of the NE Slave Craton and tectonic settings of similar age.

Microstructural and textural relationships of related base-metal sulphides suggest three main phases of mineralization superimposed with the Elu Link magmatic and tectonometamorphic history. Indeed, base-metal sulphides and Au+As+Cu+Zn anomalies in the belt occur irrespective of the rock types but seem to be mainly vectored by the metagabbro intrusions. Owing to its structural and lithological connection

Students examining indicator minerals

with the neigbouring gold-rich HBB, these mineralization features are indications that the EB has considerable exploration potential.

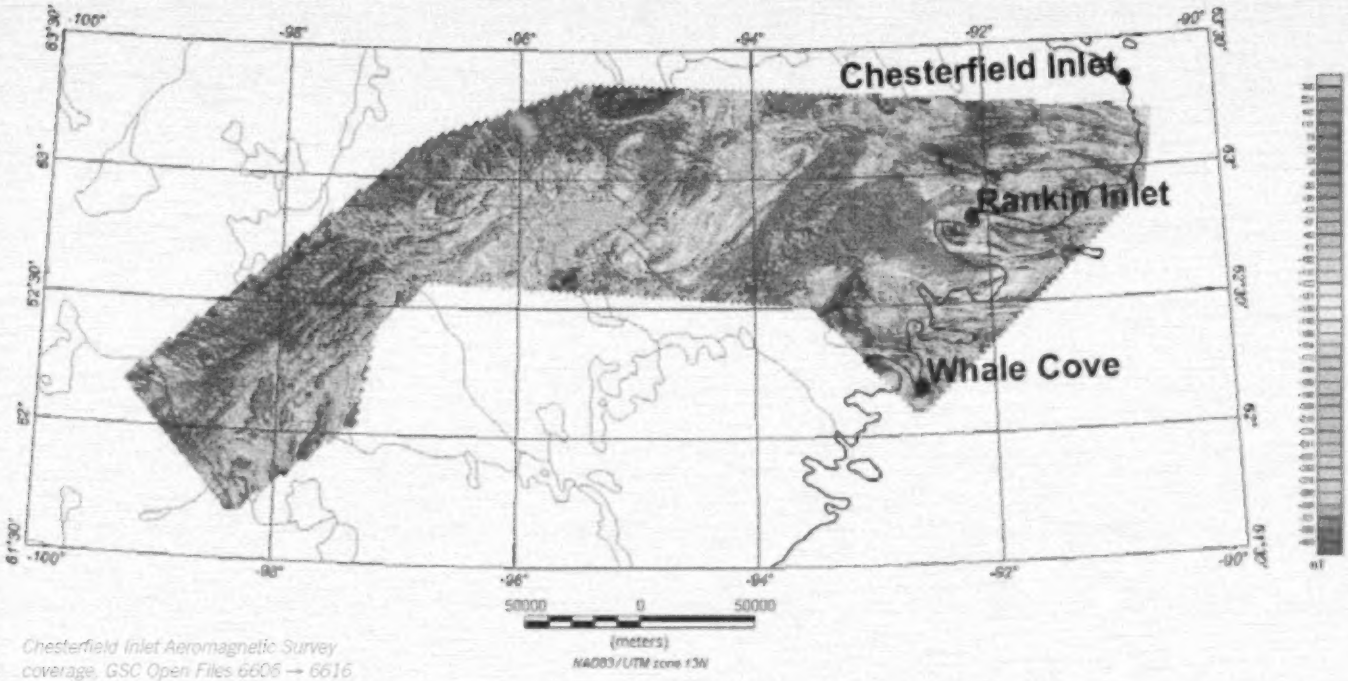
The work in EB is conducted in the framework of a collaborative project between the University of New Brunswick (H. Mvondo and D. Lentz), Newmont Mining Corporation (Marc Bardoux), and CNGO. It is supported by CNGO and logistical, in-kind and technical guidance provided by Newmont Mining Corporation.

Central Baffin Gold

Kate Rubingh and Bruno Lafrance (Laurentian University)

Gold mineralization in the Rae Province of central Baffin Island is typically associated with complexly deformed iron formation horizons of the Bravo Lake formation. The Bravo Lake formation, a 1.9 Ga old metavolcanic belt, is continuous over a lateral extent of more than 140 kilometres (km) and contains multiple iron formation horizons. There are 16 gold prospects across the belt, four of which have been the focus of more detailed exploration programs, including mapping, geophysics and drilling. The main gold occurrences are Malrok, Durette, Ridge Lake and Kanosak. Anglo Gold Ashanti acquired an interest in the properties in 2009 and funded an exploration program in 2010 consisting of mapping, drilling and geophysics on Malrok and Kanosak.

The main objective of the project is to develop a better understanding of the local and regional controls on gold mineralization in the Bravo Lake formation. Research is being conducted as part of a PhD study at Laurentian University. This research is supported by CNGO with field, logistical and technical guidance provided by Commander Resources Limited, AngloGold Ashanti Limited and GeoVector Management Inc (management consultants).



Chesterfield Inlet Aeromagnetic Survey coverage, GSC Open Files 6606 → 6616

During the 2010 field season, regional mapping (1:15,000) was conducted in the belt. Mapping was focused on the Malrok and Ridge Lake prospects. In addition, regional traverses were done across the Archean domes outside the Bravo Lake belt, in order to resolve structural and metamorphic events. The Kanosak and Durette prospects were mapped in less detail. Drill core was reviewed and rock samples were collected from each of the prospects. Initial results have identified differences from previously published stratigraphic interpretations of the belt. These preliminary findings suggest that the stratigraphy and structure of the belt are more complex than previously thought. This has important implications on the controls on gold mineralization in the region. Results from this work will be published in coming year.

Borden Basin Multiple Metals
Elizabeth Turner (Laurentian University)

To provide companies with new exploration tools for Mesoproterozoic basins in northeast Nunavut, a re-examination of known base-metal occurrences and development of modern models for base-metal and uranium mineralization is underway in the Borden Basin. A major paper that established the stratigraphic framework for carbonate-hosted base-metal showings in the Borden Basin was published in *Canadian Journal of Earth Sciences* in December 2009. Building on the success of the 2009 field season, basin analysis and economic assessment has been expanded to include other basins in the Bylot Basin cluster, most of which remain poorly known and next to unexplored. Establishing the tectonostratigraphic evolution of these basins will be essential to determining their economic potential and is the intended focus for the next two years of this project.

Current work is focused on detailed petrography, geochemistry, geochronology and detrital zircon studies to define the stratigraphy, age, provenance, evolution and metallogenic potential of the basin. These results will provide a better understanding of the tectonic conditions responsible for the formation of the Nanisivik ore deposit and to understanding the metallogeny of the basin. In addition, logistics for field work in 2011 and 2012 are being planned and new PhD research at Laurentian University will begin in 2011.

Hyperspectral Surveys – Izok Lake and High Lake Greenstone Belts
Jan Peter and Jeff Harris (Geological Survey of Canada); Peter White and Matt Maloley (Canada Centre for Remote Sensing)

The goal of this work is to test the effectiveness of airborne hyperspectral imaging as a mineral exploration tool in Canada's north. Spectral methods have been shown to be highly effective in recognizing and delineating zones of hydrothermally altered rocks that are spatially and temporally related to mineralization. However most research on hyperspectral exploration methodology for exploration has been carried out in arid and desert terrains and there are relatively few studies in Canada's cold north above the treeline.

In 2010, hyperspectral surveys were flown over parts of the Izok Lake and High Lake greenstone belts during early-to-mid-August. These surveys will be used to test the suitability of hyperspectral data for delineating hydrothermal alteration footprints of volcanogenic massive sulfide deposits (VMS) Hydrothermal alteration styles (e.g., chloritization, sericitization, carbonatization) associated with VMS exhibit mineral absorbtion features which are ideally suited for detection by hyperspectral methods. Challenges include the heavy lichen cover on rock outcrops and low sun angles at such extreme latitudes.

Field camp, Cumberland Project
Courtesy of GSC

This is a cooperative project involving personnel from the Geological Survey of Canada, CNGO and the Canada Centre for Remote Sensing, with logistical and in-kind support provided by industrial partner Minerals and Metals Group Limited. Preliminary data are expected to be publicly available for Izok Lake before the end of 2010, but data for High Lake will be released at a later date.

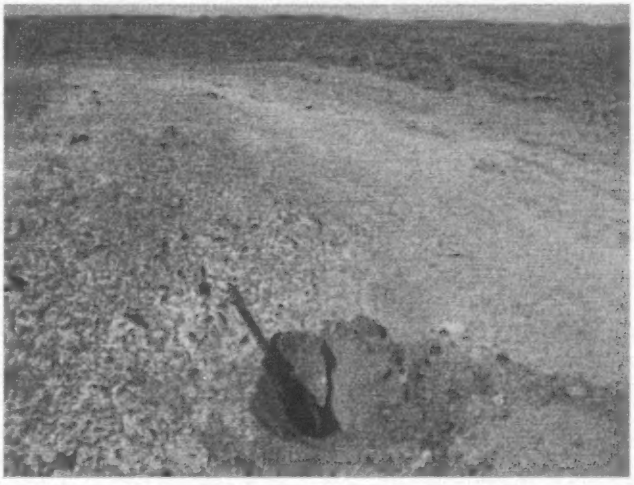
GEO-MAPPING FOR ENERGY AND MINERALS (GEM)

Chesterfield Gold Project
Sally Pehrsson and John Percival (Geological Survey of Canada)

A new high resolution aeromagnetic survey has been released at www.gdr.nrcan.gc.ca/aeromag for the central Kivalliq as part of the upcoming Chesterfield gold project of Natural Resources Canada's GEM program. The Chesterfield gold project will improve knowledge of this gold-rich area of the western Churchill province where advanced development and exploration have been hampered by incomplete understanding of the location and character of major structures as well as the impact of multiple deformation events on adjacent units and gold localization. The survey encompasses greater than 110,000-line kilometres (km) at 400 metres (m) line spacing over a heavily-drift covered major boundary that includes the past-producing Cullaton gold mine, the Meliadine gold deposit, and major active SY and Maze Lake gold projects. The data show extensions of the host stratigraphy to Meliadine, one of Nunavut's world-class gold deposits and shows iron formations that host Meliadine and the SY prospect can be delineated in regions of little or no exposure. Importantly the data illustrate a major crustal break south of Meliadine and refolding of its host units northward, instead of southward as previously interpreted. This opens up a considerable area for prospectivity. A presentation at the Yellowknife Geoscience Forum attracted significant interest from industry active in the area.

Cumberland Peninsula Integrated Geoscience Project
Mary Sanborn-Barrie (Geological Survey of Canada); Mike Young (Dalhousie University)

A second field season of geoscience research on Cumberland Peninsula, Baffin Island, was conducted in 2010. Cumberland Peninsula represents a frontier region for resource exploration and development. Prior to this work significant gaps in geological knowledge of the area existed which detracted from investment and local opportunities. The project has resulted in a vastly improved understanding of eastern Baffin Island's lithological associations, crustal architecture and mineral potential.



Sampling gossan on Melville Peninsula
Courtesy of CNGO

To date, the project has released approximately 58,000 line-km of high resolution aeromagnetic data flown in 2008 (GSC Open Files 6086 and 6094). Bedrock and surficial mapping conducted over the southern part of the peninsula in 2009 were extended across the northern part in 2010. These activities have significantly revised geologic understanding of this region and triggered new interest in its mineral potential. It is now recognized that ancient (2.8 to 3.0 Ga) tonalitic basement underlies about half of Cumberland Peninsula, thus opening up its prospectivity for diamonds. New interest is highlighted by subsequent prospecting permit coverage over the 2009 map area. Younger supracrustal strata of the Paleoproterozoic Hoare Bay group appears to have formed on the ancient tonalitic continental margin about 1.9 billion years ago. The younger cover sequence hosts a black shale – iron formation – volcanic association with elevated concentrations of multiple metals, presenting an exploration target for polymetallic copper-nickel-gold. Both ancient tonalite "basement" and younger "cover" strata are cut by a belt of plutonic rocks, that extends more than 200 km from Pangnirtung to Qikiqtarjuaq.

Ongoing analytical work on hundreds of samples collected during 2009 and 2010 will further refine emerging tectonic, metallogenic, glacial history, and ice dynamic models. The project supports student research in collaboration with the University of Calgary, University of Saskachewan and Dalhousie University. Essential field logistical support was provided by Polar Continental Shelf Program with collaborative support by Canada-Nunavut Geoscience Office.

Melville Peninsula Multiple Metals Project

David Corrigan and Léopold Nadeau (Geological Survey of Canada); Tommy Tremblay, Gabriel Machado and Rosemarie Khoun (Canada-Nunavut Geoscience Office)

The Melville Peninsula Multiple Metals Project is a three-year bedrock and surficial mapping project focusing on the Precambrian Shield of Melville Peninsula. This multidisciplinary project is a collaboration between the Geological Survey of Canada, CNGO, Memorial University, University of Manitoba, University of New Brunswick, University of Western Ontario, University of Waterloo and Boston College. The study area forms part of the Rae geological province and consists of multiple strands of Archean greenstone including the Prince Albert Group, as well as associated orthogneiss and granitoids. In 2010, field work was concentrated over the southern half of the peninsula, over the Penrhyn group and further south on a presumably Archean-age terrane composed mainly of granulite facies orthogneiss and granitoids, unofficially named the "Repulse Bay Block".

Bedrock studies were concentrated mostly on the Penrhyn group and its Archean basement (Rae craton) to gain a better understanding of the stratigraphic, structural and metamorphic evolution of the supracrustal rocks of the Penrhyn group, in order to test whether basin-scale correlations can be made with gold-bearing Piling group rocks across the Foxe Basin. Preliminary observations suggest that most of the strata can indeed be correlated with some degree of certainty. A flycamp located in the Prince Albert Hills on western Melville Peninsula was set up to gain a better understanding of the stratigraphy and mineral potential of the Prince Albert Group, as well as its tectonothermal overprint. Near Adamson River a Ni-Cu-Co showing (Open File 6729) is hosted by a relatively thick ultramafic body of cumulate-textured periodotite that is subconcordant to supracrustal strata of the Prince Albert Group. The mineralized zone occurs as several gossanous zones (2 m x 3 m) over a strike length of 40 m, with grab samples running 0.7 to 0.9% Ni for disseminated sulfides, up to 7.3 to 8.0% Ni for massive sulphides.

TOP: Adamson River Ni-Cu-Co showing (courtesy of GSC)

BOTTOM: Ice-marginal delta (courtesy of CNGO)

Quaternary studies focused on the southern half of Melville Peninsula in 2010. This work improved the understanding of ice flow history in the region and provided tighter till sample grids down-ice from known bedrock mineralization and till anomalies. Heavy mineral concentrates from the till sampling program will be analyzed to obtain results regarding base metals, gold and diamond potential.

Viewing the boundary between Bad Cache Rapids and Churchill River groups in Cape Donovan, Southampton Island
Courtesy of CNGO

In 2010, a 44,500 line-km airborne geophysical survey covering a large part of central Melville Peninsula was released for publication. The eastern half of a survey flown over the Penrhyn Group on southern Melville Peninsula was also released; the western half is expected in fall 2010. Data and maps from the Sarcpa Lake and Miertsching Lake East surveys can be downloaded for free at: www.gdr.nrcan.gc.ca/aeromag/index_e.php.

Northeast Thelon Basin Uranium
Charlie Jefferson (Geological Survey of Canada)

This project aims to improve the geophysical-geological knowledge of uranium in the late Paleoproterozoic northeast Thelon Basin for sustainable development. Under Natural Resources Canada's Geomapping for Energy and Minerals Program, 18 scientists from the Geological Survey of Canada are linking geophysical data from many staff in an eight-company consortium, with 26 professors and students from eight universities to build and enhance a GIS database. Full permitting and biannual community engagement are ongoing.

Shared industry airborne geophysics merged with new Geological Survey of Canada data help constrain and extend new conceptual knowledge to make better maps. Six Neoarchean sequences are distinguished from four early Paleoproterozoic sequences. The Kiggavik trend of exhumed unconformity uranium deposits is coincident with 1,750 Ma Nueltin porphyritic granite intruding Neoarchean feldspathic metawacke and Paleoproterozoic quartzite that were isoclinally folded, multiply refolded, paleo-weathered and hydrothermally altered along intersecting brittle faults reactivated during trans-extensional development of the Thelon Basin. Lithologic, structural, mineralogical, geochemical and age vectors of uranium are being compared with those of the closely correlative Athabasca Basin in northern Saskatchewan.

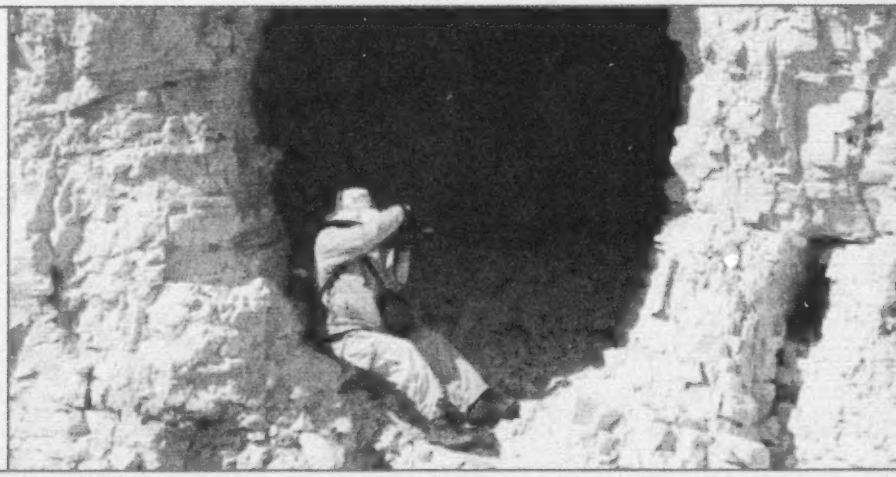
Hudson Bay – Foxe Basin Energy Project
Shunxin Zhang (Canada-Nunavut Geoscience Office)

Hudson Bay and Foxe Basin are two large Paleozoic sedimentary basins located in eastern Nunavut. Their petroleum potential is unknown. In 2007, CNGO began a Nunavut Energy Project focusing on the Paleozoic stratigraphy and petroleum potential of Hudson Bay. This project was merged into the GEM Hudson Bay-Foxe Basin project in 2009.

On Southampton Island, three oil shale intervals within the Paleozoic sequence were discovered. In 2010, a five-day field trip to Southampton Island was led by CNGO in order to entice world-wide attention to the underexplored Hudson Bay Basin. The field trip guidebook has been published as GSC Open File 6668. Petroleum geologists from Geological Survey of Canada, Ontario Geological Survey, Manitoba Geological Survey, Shell Oil Company (Houston) and Cairn Energy (Scotland) participated in the trip.

Current work is focusing on analyzing samples collected from previous field work on Southampton Island and Melville Peninsula. This includes analysis of stratigraphy using microfossil conodonts and making stratigraphic correlations between Foxe Basin and Hudson Bay Basin. A new publication about Late Ordovician conodont biostratigraphy and redefinition of the age of oil shale intervals on Southampton Island will be seen on the Canadian Journal of Earth Sciences website in early 2011.

Reviewing map notes, Cumberland Project
Courtesy of GSC



Geologist viewing the breccias unit of Red Head Rapids Formation – a potential reservoir for a petroleum system
Courtesy of CNGO

New field work will be conducted in 2011 on southern Baffin Island to expand the research area from Hudson Bay and Foxe basins to the southeast Arctic platform. This will allow for stratigraphic correlations between the Hudson platform and southeast Arctic platforms and to assess the petroleum potential in southern Baffin area.

Tri-Territorial Bedrock, Surficial and Indicator Mineral Compilations
Andy Moore (Geological Survey of Canada)

Through GEM, the partnered tri-territorial database compilation projects are on track to consolidate northern bedrock and surficial geological map and indicator mineral information. This information is being integrated into comprehensive databases that can be queried on multiple fields and downloaded for further use and analysis. The bedrock and surficial map database projects have identified source maps from across the three territories, the database models have been designed and the databases are being populated. The indicator mineral database is loading new and published GSC data and is currently deployed through the GSC Geochemical Data portal (www.gdr.nrcan.gc.ca/geochem/). All database projects have tools and procedures to load new GEM data as it is compiled and processed. These databases will contribute to data integration and improved access to geological knowledge pertinent to energy and mineral resources and provide input parameters and attributes suited to developing resource potential.

AGGREGATE AND INDUSTRIAL MINERALS

Southhampton Limestone Project
Shunxin Zhang (Canada-Nunavut Geoscience Office); Eric Prosh (Government of Nunavut)

Limestone, mostly of the Upper Ordovician Bad Cache Rapids Group and Lower Churchill River Group, is extensively exposed around Coral Harbour on southern Southampton Island. To investigate if this area is a suitable source of industrial minerals to supply new or planned mines in the Kivalliq region, CNGO initiated an Industrial Minerals (Limestone) Project in 2009. Limestone samples from Upper Ordovician Bad Cache Rapids and Churchill River groups at 21 different localities were sampled. Analytical work on these samples has focused on geochemical and petrographic studies. The quality of limestone is interpreted to be medium-low grade on Southampton Island The final outcome of this work will be an assessment of the industrial mineral (limestone) potential around Coral Harbour. It will be released as a Geological Survey of Canada Open File in early 2011.

Aggregate Resource Mapping: Repulse Bay and Gjoa Haven
Shirley McCuaig (Nunami-Stantec); David Mate and Serge Basso (Canada-Nunavut Geoscience Office)

Sufficient quantity and variety of high-quality granular material provides the basis for infrastructure development and the economic well-being of every community in Nunavut. This multi-year project is focused on locating, mapping and describing potential aggregate resources in priority communities. In 2010-11, in consultation with the Government of Nunavut, the communities of Gjoa Haven and Repulse Bay were selected for aggregate mapping work.

In each community the surficial geology of an area of approximately 10 km in radius was mapped to identify potential aggregate resources. Each aggregate discovery was field checked to determine the size and quality of the resource. The volume of aggregate was determined using ground penetrating radar. Quality was determined by sieve and petrographic analysis in the field. In both communities, new aggregate resources have been discovered. Results from both of these studies will be published in reports and disseminated via a new aggregate portal on www.nunavutgeoscience.ca.

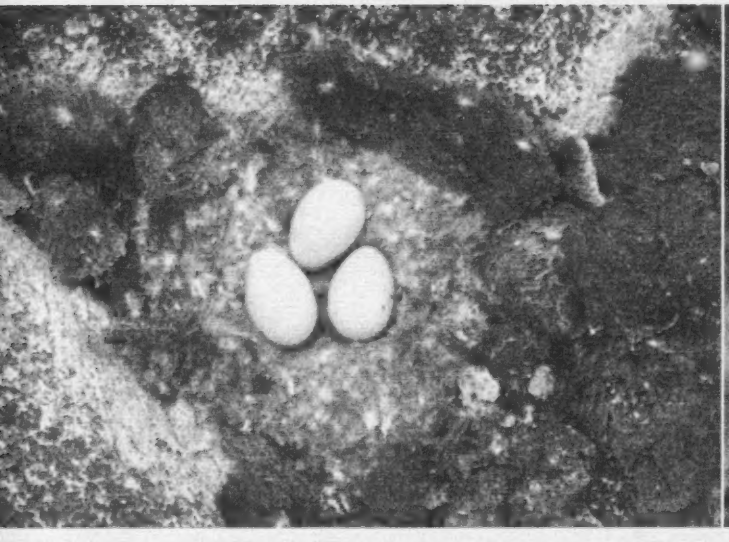
GEOSCIENCE FOR INFRASTRUCTURE

Earthquake Studies – Clyde River
David Boetler and Isa Asudeh (Geological Survey of Canada)

Baffin Bay and Baffin Island, in the regions between Clyde River and Pond Inlet, are one of the highest earthquake hazard areas in Canada. The 1933 magnitude 7.4 earthquake in Baffin Bay is the largest known Canadian earthquake east of Alberta and one of the largest worldwide north of the Arctic Circle. Several other earthquakes of magnitude 6.0 or greater are known to have occurred since the 1930s. However, there is only one seismograph station on Baffin Island. This station, located in Iqaluit, is more than 500 km from the active earthquake zone in Baffin Bay. Increasing the number of stations and improving earthquake monitoring coverage in the eastern Baffin region will have benefits for earthquake research and responsible development of infrastructure on Baffin Island. Understanding and assessing earthquake risks becomes increasingly critical as infrastructure expands and communities grow, increasing the potential consequences of earthquakes.

Work planned in 2010 will see the installation of a new earthquake monitoring station with a real-time data feed in Clyde River. Data from this station will result in improved

Eider goose nest with eggs
Courtesy of CNGO



Moss Heather in bloom
Courtesy of CNGO

capacity to monitor earthquake activity in the Arctic's most active region, and will enhance research capabilities, provide redundancy, and improve station coverage for all of Nunavut and adjacent offshore regions. This will result in a much more robust quantification of earthquake hazard and risk in the territory.

Landscape Hazard Mapping

David Mate (Canada-Nunavut Geoscience Office); Michel Allard (Université Laval); and Anne-Marie Leblanc (Geological Survey of Canada)

Strategic investments in new and existing infrastructure (roads, airports, ports, waste containment facilities, etc.) will need to be made to bring mineral wealth to market and develop Nunavut communities. The construction of new, and the integrity and maintenance of existing, infrastructure needs to be considered and assessed under existing environmental conditions as well as in the context of potential future climate changes. A joint CNGO, GN and Université Laval landscape hazard mapping project has been designed to provide baseline geoscience information on permafrost and sea-level rise to support priority infrastructure development across the territory.

Since 2009, the project has been active in several communities with a particular focus on evaluating landscape hazards in permafrost in Pangnirtung and Iqaluit. Fieldwork in support of this research includes community-scale surficial geology mapping and permafrost characterization in order to identify landscape constraints on future development. Permafrost monitoring sites have been installed in both communities to measure the impact of climate change on active layer variations and the evolution of the permafrost thermal regime in the future. Results from this work will be published in GSC Open Files and disseminated through the CNGO website. In addition, a methodological template for practitioners who would like to conduct community-based landscape hazard assessments is currently being developed.

Sea and ice, Melville Peninsula
Courtesy of CNGO

CANADA-NUNAVUT GEOSCIENCE OFFICE CONTACTS

Canada-Nunavut Geoscience Office
626 Tumiit Plaza, Suite 202
PO Box 2319
Iqaluit, Nunavut X0A 0H0
867 975 4412
867 979 0708
www.nunavutgeoscience.ca/cngo

Nunavut Geoscience Data
www.nunavutgeoscience.ca

Staff

David Mate, A/Chief Geologist
867 975 4412
david.mate@nrcan.gc.ca

Paul Budkewitch, A/Chief Geologist as of January 2011
867 975 4412
paul.budkewitch@nrcan.gc.ca

Celine Gilbert, GIS Specialist
867 975 4414
celine.gilbert@nrcan.gc.ca

Dr. Shunxin Zhang, Paleozoic Geology
867 975 4579
shunxin.zhang@nrcan.gc.ca

Tommy Tremblay, Surficial Geology
867 975 4505
tommy.tremblay@nrcan.gc.ca

Dr. Gabriel Machado, Precambrian Geology
867 975 4533
gabriel.machado@nrcan.gc.ca

Dr. Rosemarie Khoun, Precambrian Geology, Diamonds
867 975 4527
rosemarie.khoun@nrcan.gc.ca

Serge Basso, Geotechnology Analyst
867 975 4529
serge.basso@nrcan.gc.ca

KITIKMEOT REGION

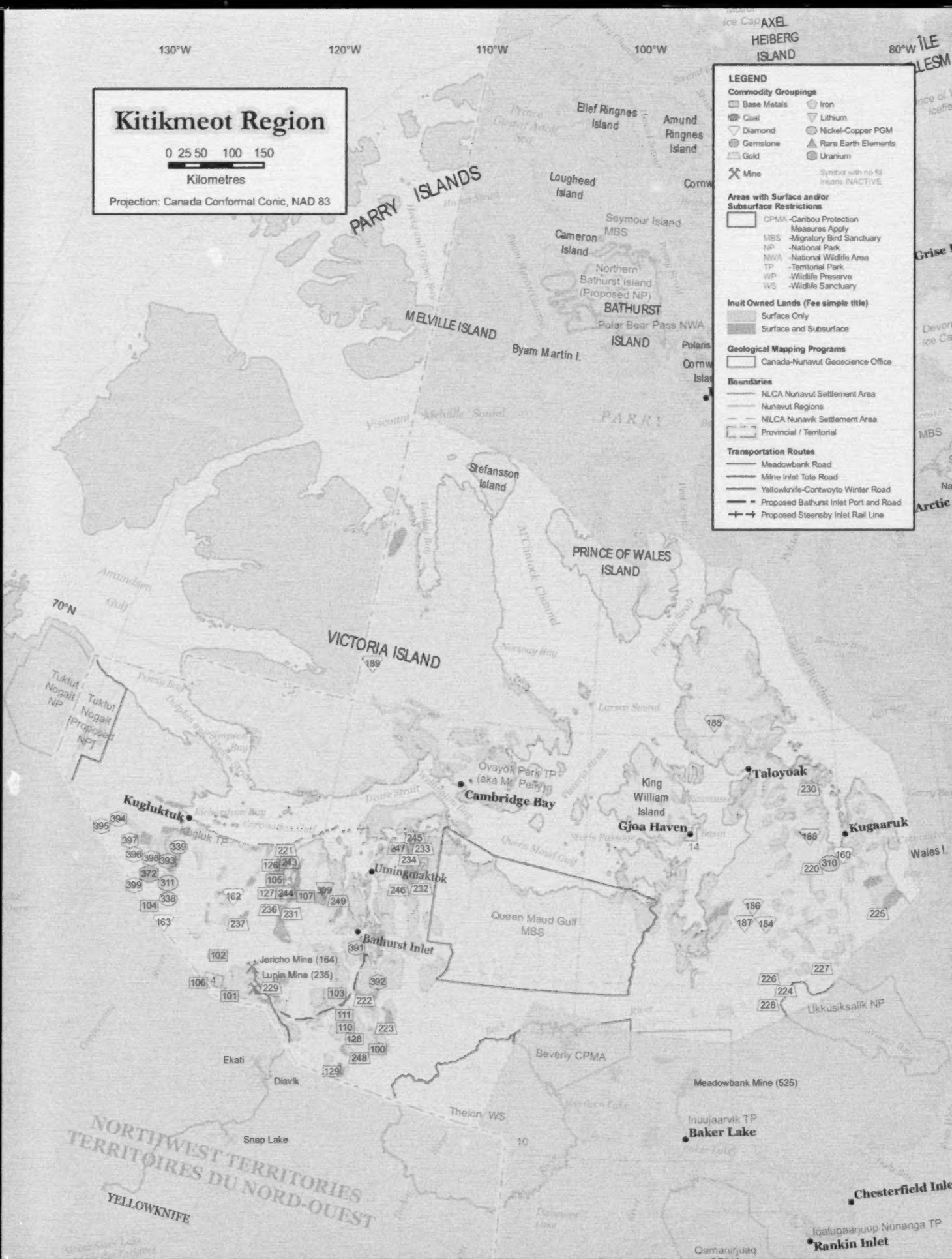
The Kitikmeot region of Nunavut encompasses an area of 446,728 square kilometres (km²), and includes the western and northern portions of the Nunavut mainland, Prince of Wales Island, King William Island, Somerset Island and the southern and eastern parts of Victoria Island. The region's main communities, Cambridge Bay and Kugluktuk, provide support and services for exploration projects. However, Yellowknife in the NWT is an important logistical and supply centre. Other communities in the region include the hamlets of Gjoa Haven, Kugaaruk, Taloyoak and Bathurst Inlet.

The Kitikmeot region is underlain by rocks of Archean and Proterozoic age, comprising parts of the Slave, Bear and Churchill geological provinces. Some Paleozoic rocks are exposed on Victoria Island. The Kitikmeot region has a significant number of exploration projects for base metals, gold, diamonds, platinum group metals, lithium and uranium.

During 2010, much of the exploration in the western Kitikmeot region was conducted by mid-tier to major mining companies. Most active was Hope Bay Mining Ltd. (a wholly-owned subsidiary of Newmont Mining Corporation), owner of the Hope Bay Greenstone Belt and its three main deposits – Doris, Madrid and Boston. On the Hope Bay Belt, more than 60 kilometres (km) of diamond drilling was completed to aid definition of the gold mineralization. A $120 million sea-lift supply was completed in 2010 in preparation for construction of the underground Doris North mine.

At Izok and High Lake deposits, MMG Resources Inc. (a wholly-owned subsidiary of China Minmetals Corporation) focused its exploration on defining a resource and upgrading information for geological interpretation. Sabina Gold & Silver Corp. own much of the Hackett River Greenstone Belt and have made significant advancements at the 100 per cent owned Back River gold project and the Hackett River base metals property. In the eastern Kitikmeot region, Diamonds North Resources Ltd. defined significant new zones of diamonds, gold and other metal mineralization on its Amaruk and Halkett Inlet properties. The former Jericho Diamond Mine was purchased by Shear Diamonds Ltd.

Trucks at Doris North operation
Courtesy of HMB

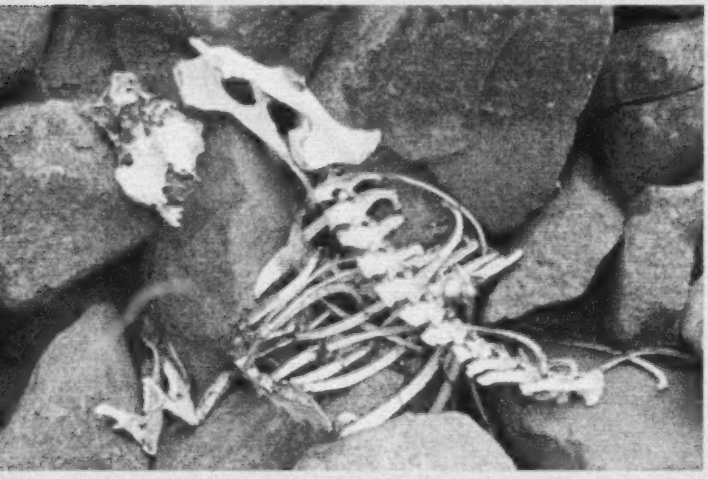

Kitikmeot Region
0 25 50 100 150
Kilometres
Projection: Canada Conformal Conic, NAD 83
130°W
120°W
110°W
100°W
80°W
AXEL HEIBERG ISLAND
LEGEND
Commodity Groupings
Base Metals
Coal
Diamond
Gemstone
Gold
Iron
Lithium
Nickel-Copper PGM
Rare Earth Elements
Uranium
Mine
Symbol with no fill means INACTIVE
Areas with Surface and/or Subsurface Restrictions
CPMA -Caribou Protection Measures Apply
MBS -Migratory Bird Sanctuary
NP -National Park
NWA -National Wildlife Area
TP -Territorial Park
WP -Wildlife Preserve
WS -Wildlife Sanctuary
Inuit Owned Lands (Fee simple title)
Surface Only
Surface and Subsurface
Geological Mapping Programs
Canada-Nunavut Geoscience Office
Boundaries
NLCA Nunavut Settlement Area
Nunavut Regions
NILCA Nunavik Settlement Area
Provincial / Territorial
Transportation Routes
Meadowbank Road
Milne Inlet Tote Road
Yellowknife-Contwoyto Winter Road
Proposed Bathurst Inlet Port and Road
Proposed Steensby Inlet Rail Line
Ellef Ringnes Island
Amund Ringnes Island
Lougheed Island
PARRY ISLANDS
Seymour Island MBS
Cameron Island
Northern Bathurst Island (Proposed NP)
BATHURST ISLAND
Polar Bear Pass NWA
MELVILLE ISLAND
Byam Martin I.
Stefansson Island
PRINCE OF WALES ISLAND
VICTORIA ISLAND
70°N
Tuktut Nogait NP
Tuktut Nogait (Proposed NPT)
Kugluktuk
Ekalugad Fiord TP
Cambridge Bay
Ovayok Park TP (aka Mt. Pelly)
Umingmaktok
King William Island
Gjoa Haven
Taloyoak
Kugaaruk
Wales I.
Queen Maud Gulf MBS
Bathurst Inlet
Jericho Mine (164)
Lupin Mine (235)
Ekati
Diavik
Beverly CPMA
Meadowbank Mine (525)
Ukkusiksalik NP
Thelon WS
Inuujaarvik TP
Baker Lake
Snap Lake
NORTHWEST TERRITORIES
TERRITOIRES DU NORD-OUEST
YELLOWKNIFE
Chesterfield Inlet
Qamanirjuaq
Idaluqaarjuup Nunanga TP
Rankin Inlet

BASE METALS

	BLUE CARIBOU
Operator/Owner	Skybridge Development Corp.
Commodities	Copper, Molybdenum, Silver, Gold, Rhenium
NTS	76G/01, 76G/02, 76G/07
Location	191 km south of Bathurst Inlet

Skybridge Development's (a subsidiary of Mega Precious Metals Inc.) 100 per cent-owned Blue Caribou property located 190 km south of Bathurst Inlet comprises 25 claims totaling 25,605 hectares. The project has been active for a number of years. Drilling in 2008 delineated an inferred mineral resource of 2.77 million tonnes averaging 2.82% Cu, 0.06% Mo, 31.26 grams per tonne (g/t) Ag and 0.20 g/t Au. Assays of 10 g/t rhenium have also been returned from mineralized drill core. Drilling results released in late 2009 extended the deposit to a depth of 225 m.

In 2010, the company conducted no fieldwork on the property; however, SGS Mineral Services at Lakefield was contracted to perform extensive metallurgical testing on samples and drill core taken in previous years. Full results are pending and the company hopes to resume exploration in 2011.



Blue caribou skeleton

	GONDOR[1], HOOD[2]
Operator/Owner	MMG Resources Inc.[1,2], Xstrata plc[2]
Commodities	Copper, Lead, Zinc[1]; Copper, Zinc[2]
NTS	76E/05, 76E/12, 86H/07, 86H/08, 86H/09[1]; 86I/02[2]
Location	225 km southwest of Bathurst Inlet[1], 220 km south of Kugluktuk[2]

The Gondor and Hood deposits were acquired by MMG in 2009 from OZ Minerals, along with the Izok Lake zinc-copper-lead-silver property and other assets in Nunavut. Both deposits have undergone intermittent exploration since the 1970s, and are viewed as potential sources for additional ore should Izok Lake go into production.

Gondor, located on the Nunavut-NWT border southeast of Izok Lake, hosts a historic, non-NI 43-101 compliant resource of 4.38 million tonnes at 0.1% Cu, 1.2% Pb, 9.7% Zn, 0.78 g/t Au and 64.6 g/t Ag; the deposit remains open in all directions and at depth. MMG's work on Gondor in 2010 consisted of an airborne magnetic survey (1,201 line-km) and 38.7 line-km of fixed loop transient electromagnetic (EM) surveying over three airborne EM anomalies. Prospecting for volcanogenic massive sulphide (VMS)-associated alteration and mineralization and till sampling for metamorphosed massive sulphide indicator minerals (MMSIM) was also carried out on the property, collecting 46 and 77 samples, respectively. No significant alteration or base metal mineralization was identified.

The Hood property contains multiple showings and deposits, three of which had non-NI 43-101 compliant reserve estimates published in the early 1990s. The Takijuq H-10 deposit, comprising four lensoidal massive sulphide bodies, was estimated to contain 1.2 million tonnes grading 4.1% Cu, 4.4% Zn and 27 g/t Ag. Reserves were also announced for Takijuq H-41 (900,000 tonnes grading 3.2% Zn, 1.4% Cu and 12 g/t Ag) and Takijuq H-41A (1.1 million tonnes grading 3.3% Zn, 2.4% Cu and 16 g/t Ag) zones. These gossanous zones occur at the contacts between andesites and meta-rhyolites, and contain massive to stringer sulphide mineralization. A limited field program was conducted on the Hood property in 2010, consisting of the collection of six till samples for MMSIM and the collection of 40 rock samples from prospecting. Results are pending from the MMSIM survey. Anomalous base metal values were returned from

several rock samples; these samples were also depleted in sodium and thus also extended the sodium depletion haloes defined by previous operators on the property.

	HACKETT RIVER
Operator/Owner	Sabina Gold & Silver Corp.
Commodities	Silver, Zinc, Gold, Copper, Lead
NTS	76F/15, 76F/16
Location	104 km south-southwest of Bathurst Inlet

Work during the 2010 exploration season concentrated at Sabina's Hackett River deposit with an exploration budget of $10 million. There are several mineralized zones within the Hackett River silver-rich VMS deposit, the main four zones being Main Zone (West, Hinge and East), Boot Zone, East Cleaver and Jo. Drilling focused on increasing the known resources and defining potential open-pit mine zones. A total of 19,443 metres (m) of drilling was completed during 2010. Of this, 25 holes (5,323 m) were drilled at East Cleaver, 18 holes (4,811 m) were drilled at Main Zone West, eight holes totaling 1697 m were drilled at Main Zone East and the Main Hinge Zone had a single hole drilled 209 m. The Boot Zone had eight holes (2,393 m) completed and 1,015 m was drilled in three holes at the Jo Zone. Away from the main Hackett River deposits, 15 exploration holes (3,995 m) tested regional targets.

At East Cleaver, 14 of the 25 drill holes were planned to test a regional fold structure located directly to the west of the known East Cleaver deposit. The hinge zone of a folded massive sulphide lens was intersected. Assays of drill core returned 118.55 m of spotty to massive sulphide mineralization averaging 106 g/t Ag and 2.13% Zn including an intercept of 59.8 m grading 211 g/t Ag and 3.55% Zn. Further step-out holes intersected similar mineralization with average grades of 200 g/t Ag and 4.37% Zn. The new intersections are within 200 m of the surface and the zone remains open at depth to the west. This new zone is significant because it may be linked geologically to the main East Cleaver deposit to the east. The remaining holes drilled in the regional structure were designed to upgrade the resource estimate for delineated areas, particularly near surface and towards the Knob Hill area. Highlights from the remaining holes include a 79.25 m intersection averaging 76 g/t Ag and 3.66% Zn.

Drilling at Main Zone West totaled 4,811 m and targeted high-grade footwall stringer copper mineralization. At least two new mineralized zones were identified and both are emplaced stratigraphically below the known massive sulphide mineralization where historical drilling has returned copper values of 2% or higher. Significant mineralization was intersected in the 2010 drilling, including 157.5 m grading 0.85% Cu and 128.2 m grading 0.87% Cu. Within these intersections are zones with significantly elevated grades; e.g., one drill hole contains 1.7 m of 908 g/t Ag, 14.37% Zn, 0.15% Cu, 4.37% Pb and 7.42 g/t Au, and another hole contains 32.85 m of 137 g/t Ag, 25.17% Zn, 0.4% Cu, 1.33% Pb and 0.29 g/t Au with the mineralization occurring as stringer zones. The new zones occur below the existing

Floatplane arriving at Hackett camp
Courtesy of NTA

Hackett River drill core examination

proposed pit outline and have not been included in the current resource model. A full assessment of the new mineralization will occur prior to the 2011 exploration program.

Winter drilling in the Main Zone East area comprised eight holes totaling 1,697 m. This exploration was targeted at extending the known massive sulphide mineralization towards the south and east. These targets lie stratigraphically below the currently defined resource. Drilling through the main massive sulphide zone was required and allowed additional controls and assays to be completed for the proposed main pit-site. Results from the exploratory drilling include high-grade assay values of an 8.75 m wide zone grading 559 g/t Ag and 1.34 g/t Au. Other results include massive sulphide intercepts averaging 598 g/t Ag, 22.81% Zn, 0.02 Cu, 2.96% Pb and 3.42 g/t Au. Drill hole SHR-10-48 proved to be one of the highlights of the year as it intersected a well-developed, deep copper-bearing horizon and returned assay grades of 3.56% Cu over 24.4 m. As with East Cleaver and Main Zone West, none of the deep footwall mineralization has been calculated within the current resource model; interpretation work will continue through the winter to define drill targets for 2011.

The Boot Zone was drilled as part of the company's winter exploration program and totaled 2,392 m in eight holes. All of the exploration in this zone was targeted at improving the drill density, and thus eliminating previously undefined areas in the resource model. As with Main Zone, these Boot Lake holes were drilled beyond the known massive sulphide horizon to test for deep copper-bearing stringers. Highlights from the Boot Lake drilling include a hole which returned a near-surface intercept of 136 g/t Ag and 5.32% Zn over 11.6 m. Another hole returned values of 15.03 m grading 278 g/t Ag, 0.13% Cu, 0.75% Zn, 0.31% Pb and 0.65 g/t Au. Below this significant massive sulphide zone is a zone of more than 100 m containing copper stringer mineralization returning grades averaging approximately 3% Cu. Another hole of significance returned a 42.1 m intersection grading 127 g/t Ag, 0.18% Cu, 4.29% Zn, 0.46% Pb, and 0.24% Au through the main sulphide zone on top of more than 40 m of high-grade copper stringer mineralization.

The company is currently seeking partners to move the project to a feasibility level.

	HEPBURN
Operator/Owner	Diamonds North Resources Ltd.
Commodities	Copper, Silver
NTS	86J/01, 86J/02, 86J/05 – 86J/07, 86J/11 – 86J/13, 86K/09, 86K/10, 86K/15
Location	150 km southwest of Kugluktuk

Diamond North Resources' 100 per cent-owned Hepburn project comprises 393,000 hectares located along the border of the NWT and Nunavut, on the northern Slave Craton. The project has been explored for several years, initially for diamonds. However, significant exploration conducted in 2009 lead to the identification of the Hepburn copper-silver anomaly. Detailed prospecting during that season collected samples from showings across the property. Samples were principally taken from an anomaly approximately 3.5 km by 1.5 km in area; this zone was identified with a magnetic high and partially overlapping radiometric anomaly (uranium, potassium and

Hackett River camp

thorium). The mineralization occurs in breccia, vein stockwork and faults. High-grade values of copper, silver, and bismuth were returned; analytical results released in early 2010 had grades up to 19.8% Cu, 123.0 g/t Ag, 0.20% U and 0.17% Bi.

The company is planning extensive ground geophysics, till sampling and a mapping program during 2011.

	IZOK LAKE[1], HIGH LAKE EAST[2], HIGH LAKE[3]
Operator/ Owner	MMG Resources Inc.
Commodities	Copper, Zinc, Lead, Silver[1]; Copper, Zinc, Silver, Gold[2]; Copper, Zinc, Silver, Gold[3]
NTS	76M/07, 76M/10[1]; 86H/10, 86H/11, 86H/14, 86H/15[2]; 76M/01, 76M/08, 76N/04, 76N/05[3]
Location	255 km southwest of Kugluktuk[1], 225 km east-southeast of Kugluktuk[2], 190 km east-southeast of Kugluktuk[3]

Significant exploration occurred in 2010 on MMG's 100 per cent-owned Izok Lake project. The property hosts the high-grade Izok Lake zinc-copper-lead-silver deposit and occurs 255 km southwest of Kugluktuk near the border between Nunavut and the NWT.

The deposit is considered VMS-style mineralization and is near-surface. Mineralization is hosted within a complex series of rocks including pyroclastic, dacitic and basaltic flows, banded iron formation and turbidite. The entire complex is cross-cut with dacitic and gabbroic feeder dykes. The deposit's resources are estimated at 14.8 million tonnes grading 12.7% Zn, 2.5% Cu, 1.3% Pb and 70.5 g/t Ag.

In 2010, exploration aimed to reinterpret historical drill hole data, to complete a series of geophysical surveys to assist in the delineation of the ore body, and to identify future targets. Detailed geological mapping was carried out over a number of high-interest areas. Over 2,311 m (five drill holes) was drilled and approximately 61,230 m of core from 287 historical drill holes was re-logged and analysed.

Geophysical surveys were the focus of the 2010 exploration program. A detailed 5,116 line-km magnetic survey was flown, a high-density gravity survey – using 2,387 stations on a 100 m grid – was completed along a 17 line-km section and a regional gravity grid was also completed. Additionally, a 12.5 line-km ground electromagnetic survey was completed over an area measuring 0.5 km by 1.2 km.

The 1710-hectare High Lake copper-zinc-silver-gold property has had significant historical exploration activity. The High Lake mineralization is hosted within the same sequence of rocks as the Izok Lake deposit. MMG acquired both base metal properties in 2009. High Lake contains estimated resources of 17.3 million tonnes grading 3.4% Zn, 2.3% Cu, 0.3% Pb, 70.1 g/t Ag and 1.0 g/t Au. This deposit has been viewed as a twin and potential source of mill-feed for the Izok Lake deposit.

The 2010 program focused on the High Lake East area where 2,363 m of drilling was completed along with a 1,706 line-km airborne magnetic survey. A 37.8 line-km ground electromagnetic survey and regional gravity survey was also conducted.

MMG expects to complete further drilling and exploration at both sites next year.

	WISHBONE
Operator/ Owner	Sabina Gold & Silver Corp.
Commodities	Copper, Silver, Zinc, Lead, Gold
NTS	76F/01, 76F/08 – 76F/10, 76F/15, 76F/16, 76G/02 – 76G/06, 76G/12, 76G/13, 76J/04, 76K/01, 76K/02
Location	415 km southeast of Kugluktuk

Sabina Gold & Silver Corp.'s Wishbone base metal property is an early-stage exploration project comprising 95 mineral claims over the broader Hackett River Greenstone Belt. Gossanous boulders and outcrop found in 2008 formed the focus of an exploration program on the Wishbone property located east of the Hackett River deposits. Exploration work, including airborne geophysics, conducted in 2009 confirmed the potential of the Wishbone property. This year's $6 million budget was spent on ground geophysics, geological mapping, prospecting, sampling and drilling with 4,558 m completed in 25 exploration holes.

Exploration focused on a region between the May Zone and the North D'Arcy showings, a corridor approximately 15 km east of the Hackett River deposits. Base and precious metals occur as semi-massive to massive sulphide mineralization with associated sulphide stringers; mineralization is hosted within a highly metamorphosed felsic volcanic sequence.

The May Zone is a flat sheet-like body dipping gently to the south with a strike length of more than 2 km. Assay highlights from the 2010 drilling include: 5.07% Zn and 0.96% Cu over 5.90 m, 10.70% Zn and 0.25% Cu over 3.90 m, and 5.56% Zn and 0.45% Cu over 10.30 m. Mineralization was traced south into the North D'Arcy zone where values of 261 g/t Ag, 5.61% Zn, 5.22% Cu, 0.55% Pb and 0.48 g/t Au over 1.55 m were returned in drill core intersections.

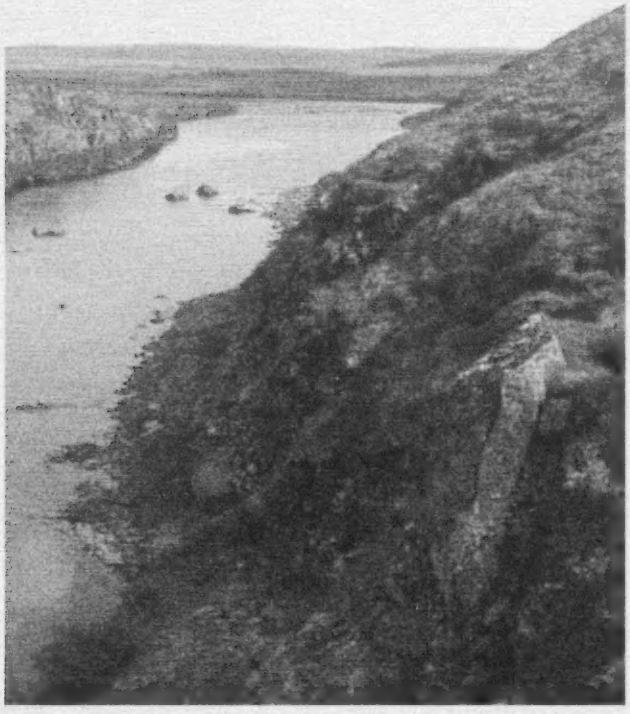
Exploration also targeted mineralization around Watson Lake. This area was first identified as a regional-scale electromagnetic target that had a geophysical response of more than 1 km along strike. Prospecting and grab samples returned significantly high assay values of 5,160 g/t Ag and 30.3 g/t Au. Mineralization occurs in felsic units similar to those found within the May Zone. Eleven holes (1,136 m) were drilled to better define the mineralized zones. Assay results were encouraging and include 53 g/t Ag, 0.93% Cu, 5.86% Zn, 0.04% Pb and 0.02 g/t Au over 1.63 m at a down-hole depth of 79 m, and 20 g/t Ag, 0.22% Cu, 6.53% Zn, 0.16% Pb, 0.03 g/t Au over 3.49 m approximately 100 m below surface.

The company intended to complete further exploration on the Wishbone property in 2010; however, this work was deferred until 2011 for Sabina to focus more resources on its advanced Back River gold project.

	YAVA
Operator/ Owner	Savant Explorations Ltd.
Commodities	Copper, Lead, Zinc, Silver, Gold
NTS	76F/09, 76F/16, 76G/12
Location	395 km southeast of Kugluktuk

The Yava Property is located in the Hackett River-Back River greenstone belt; it consists of one mining lease (1,304 hectares) and 16 claims (4,449 hectares). Base metal mineralization on the property is concentrated at the contacts of volcanic flows and fragmental rocks of varying composition. Four mineralized zones are known at Yava, including the Main Zone, North Zone, Caribou Lake Zone and South Zone. Exploration on the property began in the 1970s, and resumed in 2004 after a nearly 30 year hiatus. A non-NI 43-101 compliant resource of 1.3 million tonnes of 1.03% Cu, 1.60% Pb, 4.98% Zn, 3.42 oz/t Ag and 0.008 oz/t Au for the Main Zone was prepared in 1976.

The last exploration work reported on the property was carried out during 2007. The program consisted of an 850 line-km helicopter-borne electromagnetic survey and subsequent ground follow-up. This work resulted in 13 geophysical conductors being selected for further ground investigation.



Gossan on Wishbone property
Courtesy of TMC

Representative lithologies on Amaruk property
Courtesy of DNR

DIAMONDS

AMARUK	
Operator/ Owner	Diamonds North Resources Ltd.
Commodity	Diamonds
NTS	56N/16, 56O/13, 56O/14, 56O/15, 57A/02 – 57A/07, 57B/01, 57D/02
Location	40 km southwest of Kugaaruk

The Amaruk property is 100 per cent-owned by Diamonds North Resources. During 2010, the claims were separated into different projects based on various mineralization found underlying this large claim block. Amaruk, the core project, contains nickel-copper-PGM, gold and diamonds. The Halkett Inlet project, approximately 120 km north of the Amaruk claims, contains gold and other metals. Diamonds North continues to hold a 100 per cent-interest in each of the projects. However, in 2010 Diamonds North signed a letter of intent with MMG allowing the company to earn an interest in all base metals on the property.

Diamonds North completed a 25-tonne bulk sample of the Beluga-3 kimberlite body following microdiamonds being identified from a mini-bulk sample taken in 2009. The 2010 bulk sample was extracted using a large-diameter reverse circulation (RC) drill. Micro-diamond results by dense media separation (DMS) are pending. Other drilling intersected a previously unknown phase of non-magnetic kimberlite within the Beluga-3 body, increasing the conceptual size of this kimberlite to more than one hectare.

Till sampling and other interpretation studies undertaken in 2010, highlighted encouraging garnet geochemistry over the property, suggesting that there are additional undiscovered kimberlites or that there are additional untested phases of kimberlite within the Beluga-3 body. The company also tested the effectiveness of a time domain electromagnetic geophysical survey on various kimberlitic bodies on the property.

HAMMER	
Operator/ Owner	Stornoway Diamond Corporation, North Arrow Minerals Inc.
Commodity	Diamonds
NTS	86I/15
Location	142 km southeast of Kugluktuk

In 2009, Stornoway and its joint venture partner North Arrow Minerals discovered the Hammer kimberlite on their claims 140 km southeast of Kugluktuk in the Coronation Gulf area. During initial exploration, several float and surface samples

were recovered and sent for micro-diamond analyses by caustic fusion. The recovery of diamonds on a 0.106 millimetre screen confirmed the body as diamond-bearing.

During 2010, the partners completed a ground geophysics (total field magnetics) survey across the projected surface area of the Hammer kimberlite. In total, the survey completed 7.6 line-km and initial results suggest a magnetic body lying in the centre of the surveyed area. This body is coincident with a surface topographic depression with rough surface dimensions of 185 m by 65 m. To complement the magnetic survey, a 2.2 line-km horizontal-loop electromagnetic survey was also completed. This survey showed a moderate response across an area roughly coincident with the magnetic anomaly. Drilling permits have been secured for this property and an exploratory drilling program is planned for 2011.

HEPBURN	
Operator/ Owner	Diamonds North Resources Ltd.
Commodity	Diamonds
NTS	86J/01, 86J/02, 86J/05 – 86J/07, 86J/11 – 86J/13, 86K/09, 86K/10, 86K/15
Location	170 km south-southwest of Kugluktuk

Diamond North Resources' 100 per cent-owned Hepburn project lies with the north Slave Craton and is located along the border of NWT and Nunavut. The project area started initially as a diamond exploration property and has been explored for several years. Exploration was conducted in 2009 that led to the identification of the Hepburn copper-silver anomaly (see Hepburn under base metals earlier in this section). For this Nunavut property, Diamonds North has concentrated on copper, silver and bismuth occurrences.

Along the side of open pit at Jericho Mine
Courtesy of NWT

JERICHO MINE	
Operator/ Owner	Shear Diamonds Ltd.
Commodity	Diamonds
NTS	76E/13, 76E/14, 76L/03, 76L/04
Location	255 km south-southeast of Kugluktuk

On August 27, 2010, Shear Diamonds announced the purchase of the former Jericho diamond mine and surrounding mineral claims, mining leases and permits, formerly held by Tahera Diamond Corporation and Benachee Resources Inc. The property is approximately 26,300 hectares in size and is located in the northern Slave craton.

Trustee CAZ Petroleum Inc. completed a re-assessment of resources within the current Jericho mine site and on the overall property, prior to the Shear Diamonds purchase. Past resource estimates have shown indicated resources of 3.7 million tonnes containing 4.17 million carats and 3.4 million tonnes of inferred resources carrying 1.76 million carats. A total of 1.6 million tonnes of kimberlite was mined between 2006 and 2008 from the 2004 NI 43-101 compliant resource. An additional 65,000 carats is accessible in a 156,000 tonne surface stockpile.

The purchase of Jericho includes the main mine site, all equipment, camp and plant facilities, the Carat property, 50 per cent-interest in the Polar property (a joint venture property with DeBeers Canada Inc., which holds the remaining 50 per cent) and a 75 per cent-interest in the Rockinghorse property (25 per cent-owned by Rio Tinto Exploration Canada Inc.).

Shear Minerals changed its name to Shear Diamonds Ltd. in December 2010. The company is completing studies for the remainder of 2010; however, the company expects a full exploration and development program to occur in 2011.

GOLD

AMARUK GOLD	
Operator/ Owner	Diamonds North Resources Ltd.
Commodity	Gold
NTS	56N/16, 56O/13, 56O/14, 56O/15, 57A/02 – 57A/07, 57B/01, 57D/02
Location	40 km southwest of Kugaaruk

The Amaruk property is 100 per cent-owned by Diamonds North Resources. This year, the company separated the multi-commodity claims into individual projects to focus exploration on individual commodities. On the Amaruk property, projects focused on both diamonds and gold. Gold exploration focused on mapping and sampling of previously identified target areas including the DEL gold showing discovered in 2009. Work additionally concentrated on 20 areas that had been identified during the 2009 field season where all anomalies returned results grading more than 1 g/t Au.

The DEL gold showing returned grades up to 4.16 g/t Au from grab samples and values up to 1.20 g/t Au over 3.0 m from chip samples. This showing is approximately 15 km long and comprises several internal zones. The eastern zone is approximately 9 km long and contains at least two parallel shallowly-dipping sulphide-bearing iron formations. The western zone contains similar iron formation and additionally contains gossanous metasedimentary rocks with anomalous values of gold, silver and copper. A ground geophysical magnetic survey conducted over a portion of the eastern zone indicates that the iron formation is continuous and can be traced under the shallow overburden. Desktop analyses of the regional structures will be undertaken in the near future and will allow the company to identify areas where the overburden is thin. Diamonds North anticipates in areas of thin overburden that this formation can be manually stripped off the bedrock to allow for systematic grab and channel sampling of the iron formation. In areas where the overburden is thicker, soil sampling and ground geophysical surveys will be conducted to assist in the delineation of targets and identify bodies suitable for drilling in 2011.

Another showing, the Far East showing, was formerly referred to as the PB3 showing. A total of 83 rock samples were collected in 2010 and 27 samples returned values greater than 0.1 g/t Au. Prospecting in areas where till samples contain gold anomalies led to the identification of an area with anomalous gold and silver values in both rock and till samples; significant values in rock samples include 2.66 g/t Au and 1.19 g/t Au with 49.5 g/t Ag. Gold mineralization occurs in at least four structurally controlled zones within a 2 km^2 central core area of felsic intrusive rock. The highest gold concentrations occur along the margins of an overburden-covered valley; the area of mineralization is open to the west. The company considers this area to be of particular interest because of silver-gold association. Proposed work for this property includes structural studies followed by mapping, prospecting, geochemical soil sampling and ground geophysical surveying.

ARCADIA BAY	
Operator/ Owner	Alix Resources Corp.
Commodity	Gold
NTS	76M/11
Location	155 km east-southeast of Kugluktuk

The Arcadia Inuit Owned Land (IOL) concession is operated by Alix Resources Corp. under an Exploration Agreement with Nunavut Tunngavik Incorporated (NTI). The 1,280 hectare property is located near Coronation Gulf on an IOL subsurface parcel of land. Anomalous gold values have been returned from many structures related to northeast-trending faulting between the intrusive and volcanic rocks on the property. A 2008 drill program targeted the Fred Vein, North Vein and GHX Vein, which are all considered to be economically significant structures. Historical, non-NI 43-101 compliant resources are reported for the former two structures: 640,650 tonnes at 7.2 g/t Au and 139,524 tonnes at 8.6 g/t Au, respectively. No information has been released concerning work on the property.

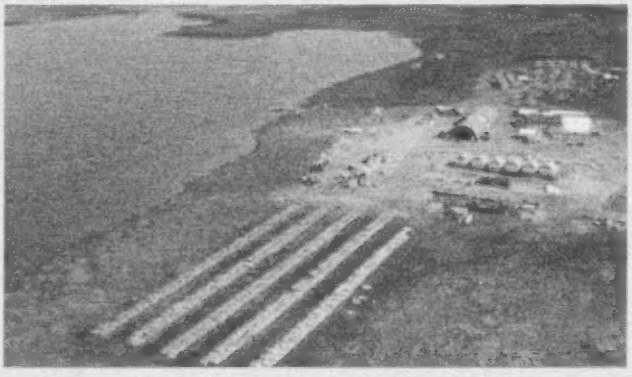
	BACK RIVER PROJECT (GEORGE LAKE[1], GOOSE LAKE[2])
Operator/ Owner	Sabina Gold & Silver Corp.
Commodity	Gold
NTS	76G/09, 76G/10, 76G/13, 76G/14
Location	372 km southeast of Cambridge Bay[1], 400 km southeast of Cambridge Bay[2]

The Back River exploration season commenced in early 2010 with a winter drill program which lead to the discovery of the Llama Lake gold zone. This new showing, located 5 km northwest of the main Goose Lake gold deposit, was targeted using geophysics and is geologically similar in stratigraphy and structure to the Goose Lake deposit. Another new discovery, the Umwelt Zone, was announced in June and lies 1.3 km south of the Llama Lake Zone and 3 km north of the Goose Lake deposit. The original exploration budget of $10 million to drill 20,000 m at both Goose Lake and the Echo Zone was increased in mid-2010 to $15 million to allow the newly discovered bodies to be adequately drill-tested. Sabina expects to produce a NI 43-101 resource estimate on the Llama and Umwelt zones in the first half of 2011. This will be followed by a scoping study to fully assess the resources at Goose Lake.

At the Llama Lake Zone, Sabina completed 61 drill holes totalling 16,700 m. Mineralization was traced approximately 500 m along strike and to a depth of 250 m. Assays returned from initial drill holes include values of 7.65 g/t Au over 7.2 m, 3.21 g/t Au over 18 m and 11.84 g/t over 5 m. Final results are pending from six of the 2010 drill holes. Mapping outlined a regional fold structure comprising an upper and a lower iron formation with an interbedded sedimentary core. The structure has been intruded by a series of late-stage felsic dykes.

Exploration at the Umwelt Zone totalled 15,950 m in 58 drill holes. Mineralization is traced to a depth of 250 m and over 650 m of strike. Initial analyses point to the presence of a southerly-plunging antiform fold structure. Significant gold intercepts were recorded in the hinge of this fold, including 7.55 g/t over 56 m and 10.52 g/t over 65.55 m. This mineralized area is now called the Umwelt East zone. Within this zone, one hole drilled approximately 200 m south of the discovery holes returned a grade of 4.99 g/t Au over 49.53 m including 7.11 g/t Au over 14 m. Further mineralization is associated with a series of folded iron formation units lying to the west of the main fold hinge. This zone, the Umwelt West Zone, returned grades of 25.05 g/t Au over 10 m including 227.8 g/t Au over 1 m. Mineralization in this west zone is narrower than in the east zone but displays good continuity as one drill hole returned values of 4.10 g/t over 5 m with other results pending. The main mineralization is hosted by a turbidite sequence comprised of arsenopyrite-pyrite-pyrrhotite rich silicate and oxide facies banded iron formation. The iron formation is interlayered with greywacke, siltstone and mudstone units of varying thickness and composition. Gold mineralization has also been observed within crosscutting quartz-carbonate veins. Evaluation of the geology and mineralization at the Umwelt Lake zone continues.

Elsewhere on the property, exploration continued at the main Goose Lake deposit, and at the Echo Zone. At Goose Lake, three holes were drilled into the main fold hinge. These holes are designed to assess the grade continuity and feasibility of the Goose Lake deposit to an open-pit design as opposed to the current underground model. Assays and geological interpretation from the Goose Lake drilling are pending. At the Echo Zone, a total of 22 holes were completed; the grades were variable, but include up to 20.65 g/t Au over 6.7 m with an intercept of 119.7 g/t Au over 1 m. The geology of this area is complex, with two distinct mineralized bodies intersecting at right angles. Higher gold grades are concentrated within this intersection region and the grades diminish distally away from this zone. More drilling was planned for this area in 2010; however plans changed mid-season with the discoveries of the higher-grade Llama Lake and Umwelt zones. Re-examination of the data and further resource characterization will be completed on the Echo Zone during the winter.



Goose Lake camp
Courtesy of Nunavut

	COMMITTEE BAY GOLD PROJECT (ANURI[1], INUK[2], RAVEN[3], THREE BLUFFS[4], WEST PLAINS[5])
Operator/ Owner	North Country Gold Corp.
Commodity	Gold
NTS	56K/02, 56K/07 – 56K/10[1]; 56J/16, 56O/01, 56P/03 – 56P/07[2]; 56K/06, 56K/10, 56K/11[3], 56J/10 – 56J/16[4]; 56K/03, 56K/04, 56K/06[5]
Location	265 km south of Kugaaruk[1], 135 km south of Kugaaruk[2], 260 km southwest of Kugaaruk[3], 220 km south of Kugaaruk[4], 247 km northeast of Baker Lake[5]

North Country Gold (a wholly-owned subsidiary of CBR Gold Corp.) is the 100 per cent owner of the Committee Bay project. This 225,569 hectare property is located 300 km north of Baker Lake. The property consists of 216 active mineral claims and 14 mining leases along the Committee Bay Greenstone Belt.

The Three Bluffs deposit is an advanced-stage exploration project with an indicated resource of 508,000 ounces (2,700,000 tonnes at 5.85 g/t Au) and additional inferred resources of 244,000 ounces (1,270,000 tonnes at 5.98 g/t Au). A regional scale structure termed the Walker Lake trend consists of iron formation rocks and hosts the auriferous mineralization. Exploration has been focused on 4.1 km of the trend in an area that includes the main Three Bluffs deposit as well as the Antler and newly-defined Hayes zones.

During 2010, significant drill programs were completed, utilizing three drills for the spring exploration and four during the summer. A total of 52 drill holes were completed along the mineralized Walker Lake trend. Two drills tested the extent of mineralization along strike to the west of the Three Bluffs deposit, and another drill explored for potential extensions to the eastern high-grade hinge zone within the Three Bluffs deposit. The fourth drill tested targets as part of regional exploration activities.

The spring program comprised six holes at Three Bluffs and 15 holes within the Antler Zone. At Three Bluffs, drilling was conducted within the existing resource area to penetrate the

Drilling on the Committee Bay project
Courtesy of IMAC

fold hinge and intersect the high-grade mineralization housed within the hinge. This drilling extended the length of the known mineralized zone to 1,500 m. Other drilling tested a shallow up-dip section that had not previously been defined as hosting mineralization. Significant intersections include 42.14 m of 5.88 g/t Au including 15 m of 10.2 g/t Au, and 2.27 g/t Au over 31.85 m including 7 m of 5.39 g/t Au. At the Antler Zone, closely-spaced holes were drilled along strike and intersected the same stratigraphy as at the Three Bluffs deposit. Highlights include a 10 m intersection of 2.67 g/t Au and another hole with 12.29 m of 4.51 g/t Au including 7.67 m grading 6.00 g/t Au.

The summer drilling program at Three Bluffs tested a 450 m-long corridor located between the main resource area and a westward step-out drill hole drilled in 2008. This exploratory hole returned 23.53 g/t Au over 13.59 m. The initial eight holes tested the eastern two-thirds of the corridor. All holes intersected mineralization that the company believes can be correlated with units within the currently modeled resource at Three Bluffs. Highlights from this drilling include: 38.5 m of 1.41 g/t Au, including 3.5 m of 5.1 g/t Au, and 1.35 g/t Au over 36 m, including intersections of 9.98 g/t over 4.45 m and 5.36 g/t over a 3 m interval. The summer drilling further defined the main Three Bluffs zone and successfully extended the mineralization 650 m to the west.

At the Antler Zone, nine holes were additionally drilled during the summer program, giving a total of 21 drill holes over a mineralized 700 m strike length. All holes intersected mineralization similar to that observed at the main Three Bluffs deposit. Highlights of the summer drilling at Antler include grades of 11.14 g/t Au over 14.06 m and 14 m of 3.51 g/t Au.

A newly-defined zone, the Hayes Zone, appears similar in nature to the rest of the Walker Lake trend and is located 3.5 km from the nearest edge of the Three Bluffs deposit. Iron formation, greywacke, felsic volcanic sequences and granitoids are included within this apparent shear-hosted gold system. Four holes were drilled into this zone. Two drill holes intersected mineralized iron formation and returned

6.30 g/t Au over 2 m and 28.08 g/t Au over 3.70 m, respectively. The target horizon intersected by the initial two holes is outlined as a near-surface high-grade body and is largely intruded by localized late-stage cross-cutting pegmatitic dykes. The discovery of gold-bearing units in this zone extends the total length of the mineralization to more than 4.5 km along strike. Further drilling is required to prove continuity and grade distribution between these zones.

In addition to drilling, the company also completed an 18.9 line-km induced polarization geophysical survey along the 7 km strike-length of the Walker Lake trend. The survey was run east of the Three Bluffs deposit to west of the Hayes occurrence and proved useful in tracing mineralization through areas of poor exposure. Five new targets, three considered high-priority, were identified. The survey results also outlined additional conductive bodies within the main resource area; these bodies will be drill-tested. The company is planning on testing these anomalous areas as part of its 2011 exploration program due to begin in April.

	CONTWOYTO IOL CONCESSIONS[1]; HOOD RIVER IOL CONCESSION[2]; ROCKINGHORSE IOL CONCESSION[3]
Operator/ Owner	Golden River Resources Corporation
Commodity	Gold
NTS	76E/15, 76E/16[1]; 76L/15[2]; 86I/09[3]
Location	160 km southwest of Bathurst Inlet[1]; 125 km west of Bathurst Inlet[2]; 185 km southeast of Kugluktuk[3]

Golden River (formerly Bay Resources Ltd.) formed an agreement in 2002 to explore for gold on Tahera Diamond Corporation's Slave properties. Exploration was conducted on the Hood River and Contwoyto IOL concessions in 2004 and 2006, and returned positive gold results from grab samples collected. A drill program was planned to follow-up this work in 2007, but no information has been released to confirm whether the program was carried out. In May 2010, Golden River purchased the Hood River, Contwoyto and Rockinghorse IOL concessions from Tahera, in exchange for $86,000 and the issuance of three million shares of stock in the company.

At the time the purchase was concluded, mention was made of a 2010 exploration program; no further information has been released concerning the proposed program.

	HALKETT INLET GOLD PROJECT
Operator/ Owner	Diamonds North Resources Ltd.
Commodity	Gold
NTS	57A/13, 57D/3, 57D/4, 57D/5, 57D/6, 57D/11
Location	85 km northwest of Kugaaruk

The 365,000 hectare Halkett Inlet gold property lies 120 km north of the main Diamonds North Amaruk claim block. This project was originally part of the overall Amaruk diamond project but early in 2010 Diamonds North separated the Amaruk project into commodity-specific exploration programs.

The 2010 exploration activities included examination of the HI-1 and 2 showings (previously the PB-1 and PB-5 showings) during a two-phased exploration program. The HI-2 showing lies 25 km from the HI-1 showing and is only 5 km from the coast. The first phase of exploration concentrated on advancing previously identified showings to a level suitable for drilling during 2011. This program utilized prospecting, mapping and systematic chip and channel sampling.

At HI-1 showing, the underlying Archean basement rock is comprised of mafic and felsic units that are cross-cut and intruded by quartz-feldspar dykes. These mineralized quartz dykes significantly add to the gold potential of the property, returning grades of up to 24.3 g/t Au. Chip samples taken across the main gold prospect returned assays of 9.4 g/t Au. Mapping and prospecting confirmed that the surrounding dyke system is extensive and also extended the total known strike length of the mineralized zone from 100 m to at least 450 m. A total of 428 chip samples was collected for assay during the 2010 season. The main gold zone lies juxtaposed against a younger granitic intrusion and is connected to a regional northwest-trending structure.

Late in 2010, the company reported assays from the HI-1 sampling program; initial results are significant with a highlight of 7.92 g/t Au from 4.25 m, including 16 g/t over 0.25 m

in the main zone and dykes. Grab samples returned values of up to 3.59 g/t Au. An additional nine samples collected from the oxidized metasedimentary unit returned assays of 0.25 g/t Au to 0.91 g/t Au. Two grab samples (with values of 3.59 and 2.12 g/t Au) were collected from the western edge of the mineralized zone. This western edge is intersected by a 2 km-long northwest-trending structure likely related to the 150 km-long Halkett Inlet fault zone. This structure and the contact zone can be traced along strike for at least four kilometres. These zones are considered prime targets for hosting additional gold mineralization and will be evaluated further in 2011.

Processing of HI-2 chip samples returned assay grades between 0.7 and 1.2 g/t Au. Iron formation units identified in airborne geophysical surveys measure one to three metres in width and were traced laterally along strike for at least 55 km. This prospect will be explored further in 2011. Plans for 2011 for this project include chip sampling, prospecting, desktop studies and interpretation, geophysical surveys and an exploratory drilling campaign.

	HOPE BAY PROJECT (BOSTON, DORIS, MADRID)
Operator/ Owner	Hope Bay Mining Ltd.
Commodity	Gold
NTS	760/08, 760/09, 760/10, 760/15, 760/16, 77A/03
Location	130 km southwest of Cambridge Bay

The Hope Bay Gold project located south of Cambridge Bay covers the majority of the Hope Bay Greenstone Belt. The project area comprises mineral claims, mineral leases and IOL Exploration Agreements for a combined total area of approximately 110,151 hectares. The project is run by Hope Bay Mining Ltd. (HBML), a wholly-owned subsidiary of Newmont Mining Corporation.

The Hope Bay Greenstone Belt, 80 km long in a north-south direction and seven to 20 km wide, lies in the Bathurst structural block, a zone in the northeast Slave structural Province. The belt and its deposits are classified as Archean

Making bentonite sausages for plugging drill holes
Courtesy of HBMC

lode gold-type, and are comparable to those of the Abitibi Belt. The Hope Bay belt is isoclinally folded with belt-parallel shear zones; the gold deposits are associated with large-scale regional structures.

Significant gold deposits defined on this property include the Doris, Madrid and Boston deposits. Current plans involve a multi-phase development strategy, where the Doris deposit will be the main focus from 2010 to 2016 with the rest of the greenstone belt's resources coming into production between 2015 and 2029.

The Doris deposits (Doris North, Doris Central, Doris Connector) occur within a steeply-dipping quartz vein system in folded and metamorphosed pillow basalts. At the north end of the system (Doris North deposit), the veins are folded into a doubly-plunging anticline with the high-grade hinge zone lying close to the surface. Advanced exploration activities include regional work across the entire belt and more specific target definition work.

The Madrid deposit includes the deposits previously known as the Rand, Naartok East, Naartok West and Suluk; these deposits have been shown in recent years to be linked.

The Madrid Trend extends north and south of the main deposits, and hosts the Spur, Marianas, Patch 7, Patch 14 and Wolverine zones. Gold mineralization is lithologically and structurally controlled and occurs adjacent to a highly deformed zone. Most resources are located within the northern two kilometers of this large-scale deformation zone.

The Boston deposit is located near the south end of the belt where four zones of mineralization have been identified. The geology comprises a series of tightly folded volcanic and sedimentary sequences.

During the 2010 exploration season, Hope Bay Mining completed infill and step-out drilling at Doris, with significant work also occurring at Madrid within the Patch 14 and Wolverine zones. Regional prospecting was completed on a number of targets throughout the Hope Bay Belt, with a combination of reverse circulation and diamond drilling being completed on 12 of the targets. Drilling totaled 60,464 m and was distributed as follows: 33,427 m at Doris, 12,049 m at Madrid, 3,644 m on regional targets, 8,978 m of regional reverse circulation drilling and 2,366 m for geotechnical purposes.

Baseline studies have been ongoing this year. These studies are a major part of work for the environmental impact statement (EIS) currently being worked on as part of Nunavut's regulatory process for the company to bring the deposits into production. Data was gathered on meteorology, air quality, noise, hydrology, marine and freshwater studies, wildlife tracking and assessment, vegetation documentation, soil analyses, land use, local culture and health. Significant social impact assessment work and community consultations were conducted this year in all of the local hamlets. During the 2010 sealift season, the company mobilized equipment and supplies needed to support work in the belt, specifically activities at Doris and its planned underground bulk-sampling program at Patch 14. Underground development began at Doris North in October 2010 with the collaring of the portal. Advancement of the decline will be limited over the winter; it is expected that mineralization will not be intersected until in the spring of 2011.

As part of its Phase 2 – Hope Bay project, HBML is planning to submit a project description in 2011. This description will involve plans for future deposits within the Hope Bay Belt as well as the possible expansion of the Doris North mine. New mines are being proposed at Madrid (Patch 14) and Boston, along with several new infrastructure components such as mill infrastructure at Boston, expanded port, camps, roads and airstrips to support these future mining activities.

	LUPIN MINE , ULU[2]
Operator/ Owner	MMG Resources Inc.
Commodity	Gold
NTS	76E/11, 76E/14[1]; 76L/15
Location	287 km south-southeast of Kugluktuk[1], 202 km southeast of Kugluktuk[2]

The Lupin gold deposit, discovered in 1961, was in production from 1982 to 1998, and then again from 2000 to 2005. Total production over the lifetime of the mine is estimated at more than 3.37 million ounces of gold at an average grade of 9.3 g/t. At the time of mine closure, a resource of approximately 400,000 ounces of gold resources remained. Lupin has changed hands several times since production ceased and is currently owned by MMG Resources Inc. (as of 2009); the Ulu gold deposit was acquired as part of the same transaction. Gold mineralization at the Ulu deposit is found within shear-hosted quartz veins; it contains a non-NI 43-101 compliant resource of approximately 1.1 million tonnes grading 11 g/t Au. Ulu is viewed as a possible source for additional mill-feed if some of the other high-grade deposits in the area (Izok, High Lake, Gondor) were to go into production and use the mill at Lupin. Both Lupin and Ulu deposits remained under care and maintenance in 2010.

Mill at Lupin Mine
Courtesy of NuCAC

NICKEL/COPPER/PLATINUM GROUP METALS (PGM)

AMARUK NICKEL	
Operator/ Owner	Diamonds North Resources Ltd., MMG Resources Inc.
Commodities	Nickel, Copper, Cobalt
NTS	56N/16, 56O/13, 56O/14, 56O/15, 57A/02 – 57A/07, 57B/01, 57D/02
Location	40 km southwest of Kugaaruk

Diamonds North Resources owns the Amaruk property, a large multi-commodity property located to the south of Kugaaruk. To date the company has discovered diamonds, gold and Ni-Cu-PGM-style mineralization. In late 2009 and early 2010, Diamonds North separated the areas hosting the different commodity types found on the property into three different projects.

In March 2010, Diamonds North signed a letter of intent with MMG Resources Inc. where MMG can earn up to a 75 per cent interest in any nickel and other base metals discovered on the Amaruk property. To complete the deal, MMG must spend $6 million and take the project to a pre-feasibility level. The 2010 base metals exploration budget, funded by MMG, was $2.5 million and comprised a 1,429 line-km helicopter-borne EM survey, and regional scale prospecting and sampling. This program resulted in the collection of 90 rock-chip and 3,800 till samples.

Prior work, including drilling at the Tunerq prospect, intersected nickel and copper sulphides grading 2.49% Ni, 0.56% Cu and 0.05% Co over a 9.1 m zone. This zone also occurs within a larger (34.6 m) anomalous zone containing 1.05% Ni, 0.26% Cu and 0.02% Co. In addition to the Tunerq occurrence, more than 170 ultramafic and mafic targets have been identified on the property. All of these targets were ground prospected, sampled and mapped during 2010; assay results are pending.

In 2011, MMG and Diamonds North intend to continue till and rock-chip sampling programs, complete geochemical analyses of the 2010 samples, expand the coverage of airborne geophysical surveys, and anticipate drilling.

MIE	
Operator/ Owner	MIE Metals Corp.
Commodities	Nickel, Copper, Cobalt, Platinum, Palladium, Gold
NTS	86J/14
Location	110 km south-southwest of Kugluktuk

The Muskox Intrusion was identified in the 1950s, and has been the subject of government mapping and exploration by various companies intermittently since that time. Parts of the Intrusion are currently being explored by MIE Metals Corp. as part of its MIE project. The project comprises the McGregor Lake (magmatic sulphide Ni-Cu-PGM mineralization) and the All Night Lake (chromitite-PGM reef-style mineralization) properties, which combined cover more than 630 km^2.

In 2010, all available historic exploration and research data was compiled in preparation for inverse modelling to create a three-dimensional model of the size and geometry of the Muskox Intrusion. The new model is intended to assist in drill targeting to support further exploration on the project.

Sulphide mineralized portion of Muskox Intrusion
Courtesy of INAC

URANIUM

COPPERMINE RIVER	
Operator/ Owner	Hornby Bay Mineral Exploration Ltd.
Commodities	Uranium
NTS	86J/12, 86J/13, 86N/01, 86O/04
Location	96 km south-southwest of Kugluktuk

The Coppermine property is 100 per cent-owned by Hornby Bay Mineral Exploration Ltd. (formerly UNOR Inc.). The property is comprised of a complex series of middle Proterozoic sequences located stratigraphically above rocks of the early Proterozoic Wopmay Orogen. Uranium mineralization is contained within the Hornby Bay Group (aeolian sandstones, conglomerates and fluvial sandstones) and the deltaic and shallow marine sequences of the overlying Dismal Lakes Group (sandstone, shale, and dolostone). Three major unconformities have been identified in the area. Basement rocks, exposing the core of the Wopmay Orogen, are located around the periphery of the basin. Prominent northeast to northwest-trending faults cross-cut the property and have structurally altered the continuity of the underlying basement. This faulting has created hundreds of metres of vertical displacement throughout the region, producing highly irregular basement topography and significant fluid conduits. Diabase dykes trending along the same strike orientation as the fault systems intrude the entire basin sequence and range in thickness from a few metres up to 50 m.

The company has explored on this property for many years. A total of 71 drill holes (19,233 m) have been drilled; the most significant mineralization includes intersections of 0.12% U_3O_8 across 9.1 m, and the highest grade is 1.25% U_3O_8 across 0.5 m.

During 2010, the company completed significant upgrades to the camp and exploration facilities. A limited drill program was also initiated to test a high-priority target lying approximately 400 m below the surface. This target was identified on a previous year's magnetic/electromagnetic geophysical survey. However, the first hole was terminated because of drilling difficulties at 344 m without intersecting any mineralization. A large-scale seismic survey is due to be completed on the property in the spring of 2011. Further drilling in 2010 was postponed until after this survey has been completed and the data analyzed. Target generation from the survey will allow a full drill program to be completed during the summer of 2011.

Exposed Lady Nye Formation within Hornby Bay Group
Courtesy of NWT

Inactive MacGregor Lake camp
Courtesy of NWT

INACTIVE PROJECTS

Tenure was maintained on four of North Arrow Minerals Inc.'s projects in 2010, but no exploration work was conducted. The list includes the company's **Hope Bay** Gold project, the **Torp Lake** lithium project, as well as the **Anialik** and **Canoe Lake** (under option to MMG Resources Inc.) base metal-gold projects. In October, North Arrow announced plans to resume exploration at Hope Bay in 2011.

The **Musk** copper-zinc-silver-gold VMS deposit is located in the Hackett River Greenstone Belt, adjacent to the Wishbone property. The project is owned by Xstrata plc, and comprises a single mining lease. No work has been reported on the property in 2010.

Strongbow Exploration Inc.'s **Silvertip** project comprises four claims and covers the Pale showing. Pale consists of quartz veining and sulphide mineralization hosted within variably silicified and carbonate-altered felsic volcanic rock. Drilling was last carried out in 2008 by then-joint venture partner North Arrow Minerals Inc.; assays returned anomalous gold-silver-lead-zinc values from the property. No exploration was undertaken in 2010.

Four of Diamonds North Resources Inc. diamond projects in the Kitikmeot remained inactive in 2010 while the company focused its attention on Amaruk and the Halkett Inlet gold project. Although no exploration took place this year, the land tenure is still in good standing for the **Victoria Island**, **Ualliq** (joint venture with International Samuel Exploration Corp.), **Sakari** (joint venture with Shear Diamonds Ltd.) and **Siku** (joint venture with Arctic Star Diamond Corp.) projects. Likewise, two diamond projects controlled by a joint venture between Indicator Minerals Limited and Hunter Exploration Group remained dormant in 2010. Neither the **Darby** project (joint venture with Teck Resources Inc.) adjacent to Sakari and Siku, nor the **Grail** project located on the Boothia Peninsula, had any work reported in 2010.

Northrock Resources Inc. completed a successful drilling program at its **Turner Lake** project in 2009, with a best intersection of 13.21 g/t Au over 13.0 m from the Main Gold Zone. However, the company was unable to initiate an exploration program at Turner Lake in 2010. Northrock's other exploration project in the Kitikmeot, the **Bathurst Inlet** uranium project, had no news released concerning work in 2010.

Two uranium projects that MIE Metals Corporation is involved in remained inactive in 2010. The **Bear Valley** project, located 75 km southwest of Kugluktuk, covers 350 km^2 of the Hornby Bay Basin and is targeted at unconformity-style uranium mineralization. The other project, titled the **HBME / MIE Metals Corporation Joint Venture** is worked in cooperation with Hornby Bay Mineral Exploration; each company acts as operator for a portion of the property. The property is underlain by the Dismal Lakes Group and the Hornby Bay Basin.

Five other uranium properties overlying the Hornby Bay Basin were inactive in 2010. Four, including the **Dismal Lake**, **Dismal Lakes West**, **Kendall River** and **Mountain Lake** uranium properties, are operated as a joint venture between Triex Minerals Corporation (a wholly-owned subsidiary of CanTerra Minerals Corporation) and Pitchstone Exploration Ltd. No news has been released concerning the properties since 2008. The fifth, Uranium North Resources Corp.'s **Northern Hepburn** project, straddles the Nunavut and NWT border. Diamonds North Resources holds a 50 per cent interest in five of the BB block claims located on the Nunavut side of the border. The project had no work completed on it in 2010 while Uranium North focused on its gold properties.

The **Chicago** and **Twin Peaks** gold projects are located in the Hope Bay Greenstone Belt, controlled by Hope Bay Mining Ltd. (a subsidiary of Newmont Mining Corporation). The Bear Lake Gold Ltd. option to gain an interest in these properties expired in 2010 without fulfilling the terms of the agreement. No work was completed on these properties in 2010.

The **Needle Lake** gold project is owned by Kaminak Gold Corporation and optioned to TerraX Minerals Inc. until December 31, 2010 – no news has been released concerning work on the property since 2008.

Two exploration projects targeting the Muskox Intrusion for Ni-Cu-PGMs remained inactive in 2010. The Muskox Intrusion has been suggested as being analogous to Noril'sk based on similarities in grade, mode of occurrence and geologic environment. The two projects are both named **Muskox**; one is 100 per cent-owned by Prize Mining Corp. and the other is held by Platinex Inc. It was announced in June that Silvermet Inc. terminated its earn-in agreement on Prize's Muskox property without gaining any interest in the property.

TOP: Prospecting at Amaruk
Courtesy of Tamerlane Ventures

BOTTOM: Arctic cotton
Courtesy of CMGC

INACTIVE PROJECTS

Number	Project	Operator
BASE METALS		
126, 127	Anialik, Canoe Lake	North Arrow Minerals Inc.
128	Musk	Xstrata plc
129	Silvertip	Strongbow Exploration Inc.
DIAMONDS		
184	Darby	Teck Resources Limited
185	Grail	Indicator Minerals Inc.
186 – 188	Sakari, Siku, Uallig	Diamonds North Resources Ltd.
189	Victoria island	Diamonds North Resources Ltd.
GOLD		
243 – 245	Anialik, Canoe Lake, Hope Bay	North Arrow Minerals Inc.
246, 247	Chicago, Twin Peaks	Newmont Mining Corporation
248	Needle Lake	TerraX Minerals Inc.
249	Turner Lake	Northrock Resources Inc.
LITHIUM		
309	Torp Lake	North Arrow Minerals Inc.
NICKEL-COPPER-PLATINUM GROUP ELEMENTS (PGM)		
338	Muskox	Prize Mining Corp.
339	Muskox	Platinex Inc.
URANIUM		
391	Bathurst Inlet	Northrock Resources Inc.
392	Bathurst Inlet (Pomy)	Northrock Resources Inc.
393	Bear Valley	MIE Metals Corp.
394 – 397	Dismal Lake, Dismal Lakes West (Sandy Creek), Kendall River, Mountain Lake	Triex Minerals Corporation
398	HBME / MIE Metals Corporation Joint Venture	Hornby Bay Mineral Exploration Ltd.
399	Northern Hepburn	Uranium North Resources Corp.

KIVALLIQ REGION

The Kivalliq region spans an area of 445,109 square kilometres (km²) and encompasses the eastern portions of Nunavut west of Hudson Bay including Southampton and Coats Islands. The region's hub communities are Rankin Inlet, Arviat and Baker Lake. Mineral exploration companies commonly utilize facilities from Rankin Inlet or Baker Lake. As exploration and mine development has expanded, other communities in the region including Arviat, Chesterfield Inlet, Coral Harbour, Repulse Bay and Whale Cove have seen some benefits from exploration activity. The Kivalliq region has seen unprecedented growth in mineral exploration activity over the last few years – much of this directed at gold and uranium exploration.

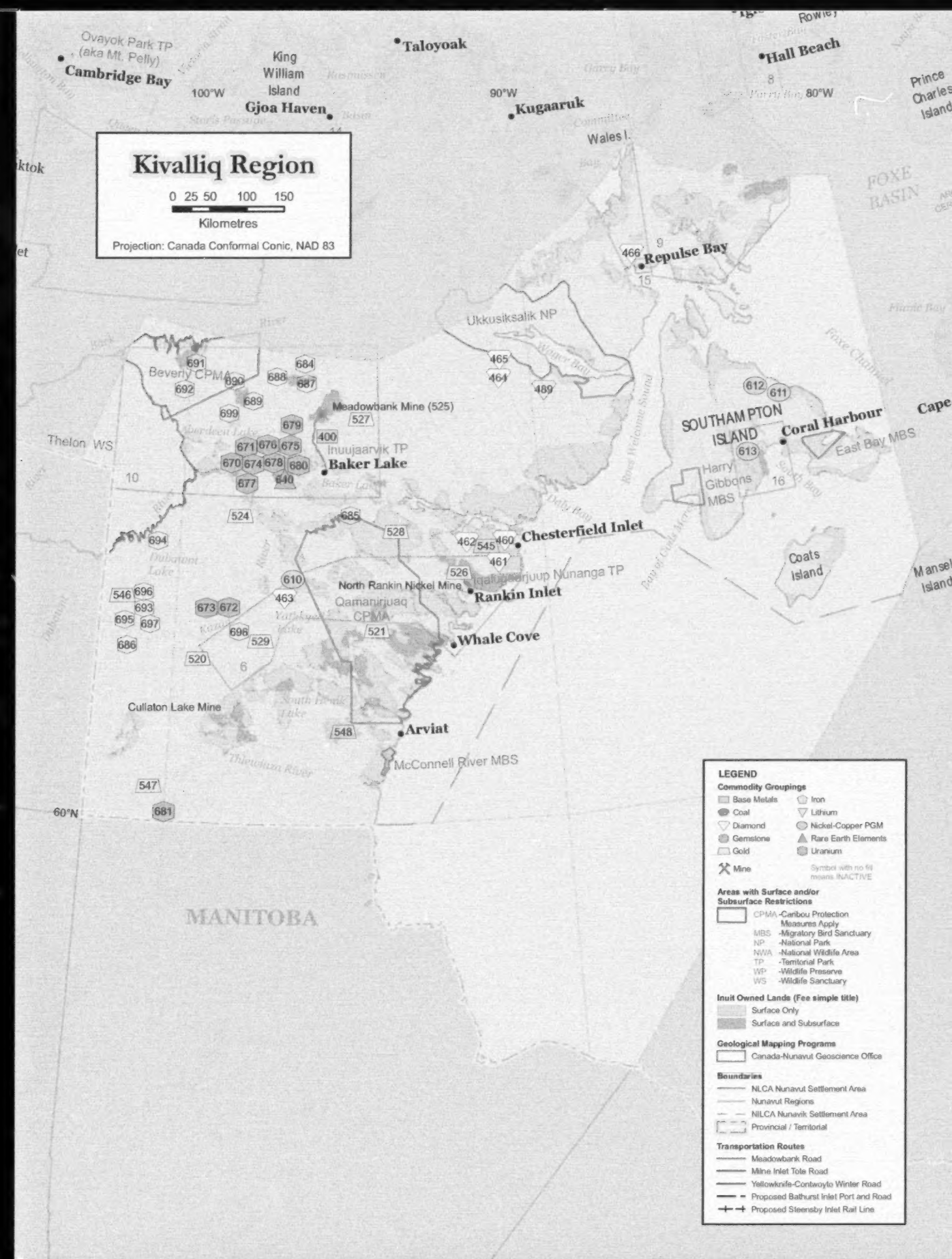
Rocks of the Archean-Proterozoic Western Churchill and Hudson Bay Lowland (Paleozoic) geological provinces underlie much of the region. Known mineral deposits and occurrences include gold, uranium, mafic to ultramafic related magmatic Ni-Cu-Co-PGM, diamondiferous kimberlites, and precious-metal bearing quartz-carbonate vein systems. The landscape is varied, with glacial terrains, muskeg, marshes and tidal flats throughout. The region contains several migratory bird sanctuaries and the Thelon Wildlife Sanctuary.

Early in 2010, Agnico-Eagle Mines Ltd. (AEM) commissioned Nunavut's newest gold mine, located 86 kilometres (km) north of Baker Lake at Meadowbank. The mine is expected to extract a maximum of 8,500 tonnes per day (350,000 ounces (oz) Au per year) until 2019, and has a gold reserve of 3.7 million ounces (32.2 million tonnes at 3.5 grams per tonne (g/t)). The mine employs 425 people, and supports a variety of secondary businesses in Baker Lake and elsewhere within Nunavut. Other significant exploration includes the Meliadine project also owned by Agnico-Eagle. This project, located near Rankin Inlet, has a $130 million exploration budget for the period 2010 to 2012.

The Proterozoic Thelon Basin, located near Baker Lake, is considered to have the potential to host uranium deposits similar to those in the Athabasca Basin. AREVA's proposed Kiggavik project is currently undergoing environmental assessment. The components include three mine sites (Kiggavik, End and Andrew), milling facilities, an access road from site to Baker Lake, and a dock site at Baker Lake.

The increase in the price of gold has contributed to the re-activation of many properties with known gold occurrences. Companies are evaluating all geochemical data sets in search of precious metal mineralization indicators. In November 2010, the digital data from a new aeromagnetic survey, flown over the area as part of NRCan's Geo-Mapping for Energy and Minerals (GEM) Chesterfield Gold project (GSC Open Files 6596-6616), was released to the public. Forty-four of the 276 prospecting permits issued in 2010 by Indian and Northern Affairs Canada's (INAC) Nunavut Regional Office are located in the Kivalliq.

Meadowbank exploration camp
Courtesy of INAC


Kivalliq Region
0 25 50 100 150
Kilometres
Projection: Canada Conformal Conic, NAD 83
Ovayok Park TP (aka Mt. Pelly)
Cambridge Bay
King William Island
Gjoa Haven
Taloyoak
Kugaaruk
Wales I.
Hall Beach
Prince Charles Island
100°W
90°W
80°W
FOXE BASIN
Repulse Bay
Ukkusiksalik NP
Beverly CPMA
Meadowbank Mine (525)
Inuujaarvik TP
Baker Lake
Thelon WS
SOUTHAMPTON ISLAND
Coral Harbour
East Bay MBS
Harry Gibbons MBS
Cape
Chesterfield Inlet
Coats Island
Mansel Island
Iqaluqtuuarjuup Nunanga TP
North Rankin Nickel Mine
Rankin Inlet
Qamanirjuaq CPMA
Whale Cove
Cullaton Lake Mine
Arviat
McConnell River MBS
MANITOBA
60°N
LEGEND
Commodity Groupings
Base Metals
Iron
Coal
Lithium
Diamond
Nickel-Copper PGM
Gemstone
Rare Earth Elements
Gold
Uranium
Mine
Symbol with no fill means INACTIVE
Areas with Surface and/or Subsurface Restrictions
CPMA -Caribou Protection Measures Apply
MBS -Migratory Bird Sanctuary
NP -National Park
NWA -National Wildlife Area
TP -Territorial Park
WP -Wildlife Preserve
WS -Wildlife Sanctuary
Inuit Owned Lands (Fee simple title)
Surface Only
Surface and Subsurface
Geological Mapping Programs
Canada-Nunavut Geoscience Office
Boundaries
NLCA Nunavut Settlement Area
Nunavut Regions
NILCA Nunavik Settlement Area
Provincial / Territorial
Transportation Routes
Meadowbank Road
Milne Inlet Tote Road
Yellowknife-Contwoyto Winter Road
Proposed Bathurst Inlet Port and Road
Proposed Steensby Inlet Rail Line

BASE METALS

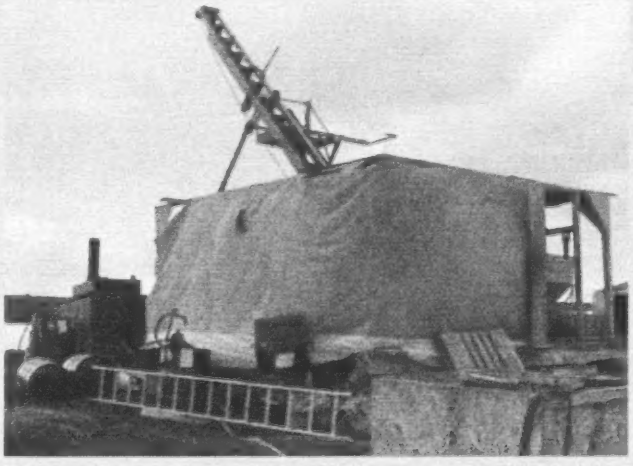
GREYHOUND LAKE	
Operator/Owner	Aura Silver Resources Inc.
Commodities	Copper, Lead, Zinc, Gold, Silver
NTS	56D/12, 66A/09
Location	38 km north of Baker Lake

The Greyhound property consists of 26 mineral claims that straddle the all-weather road to the Meadowbank gold mine. The claims cover 25,333 hectares and overlie Archean supracrustal rocks of the Woodburn Group. The property has been explored for several years and historical results highlight mineralization of base-metal, gold and silver metals with values up to 8.2% Pb, 18.5% Zn, 9.2% Cu, 3080 g/t Ag and 28 g/t Au in extensive carbonate iron formation.

Aura Silver has completed several geophysical surveys and ground prospecting programs since 2006 in an attempt to identify mineralized zones for drill follow-up. Based on the 2009 airborne versatile time-domain electromagnetic survey, several conductors were identified and tested as part of the 2010 field program which identified all conductors as graphitic shale units. Drilling north of Aura Lake intersected broad zones of carbonatized ultramafic rocks. Analytical results from one hole returned 18 metres (m) of anomalous gold with values up to 3.6 g/t Au over a 0.59 m interval. Results from soil surveys and accompanying rock-chip samples have identified a 40-hectare area, south of Aura Lake, with anomalous gold values in two ranges: 0.3 g/t to 28.8 g/t and 21 g/t to 5,380 g/t Au. An induced polarization (IP) survey delineated at least two cross-cutting structures that occur in an area of approximately 2,000 m by 1,500 m; this area is coincident with the locations of the soil anomalies and high-grade gold and silver results.

Although initially targeted for its base metal potential, new results suggest the Greyhound property is also prospective for gold mineralization. New claims were staked in the fall of 2010. In 2010, the company also identified a potential volcanogenic massive sulphide target to the east-northeast of Aura Lake. Further exploration is required to define if this target is a source of previously-reported high-grade copper and zinc cobbles.

Drill testing targets, Aura Lake area, Greyhound Lake property
Courtesy of AVAC



DIAMONDS

CHESTERFIELD INLET	
Operator, Partner	Shear Diamonds Ltd., Stornoway Diamond Corporation, Rio Tinto Exploration Canada Inc.
Commodity	Diamonds
NTS	55O/05 – 55O/07
Location	15 km west of Chesterfield Inlet

An option agreement signed in late 2009 brought Rio Tinto Exploration Canada Inc. (RTECI) into the Chesterfield Inlet project as a joint venture partner with Shear Diamonds and Stornoway Diamonds. RTECI is earning the right and has the option to acquire, subject to all underlying royalties, up to a 70 per cent interest in the project.

Drilling in Y Lake area
Courtesy of [illegible]

During 2010, RTECI and Shear completed a $500,000 exploration program on the property. The program included a 2,346 line-km high-resolution airborne magnetic survey which identified 33 kimberlite-type anomalies for ground prospecting and further work. An extensive till sampling and prospecting program was completed to interpret previously identified geochemical anomalies. Ten targets were drill-tested using a lightweight reverse circulation percussion drill. New target areas were further interpreted by a ground magnetic survey and baseline environmental data, including water sampling, was completed.

High-interest kimberlitic float was discovered by prospecting numerous frost boils. The recovered kimberlite boulders are described as being weakly magnetic and angular and, therefore, considered by Shear and its partners to be from a proximal kimberlitic source. The kimberlite is classified as high-interest Churchill Type-B, and contains large olivine macrocrysts, green-blue phlogopite and visible pyrope garnets. Samples have been collected for micro-diamond analysis and petrography; results are pending.

CHURCHILL, CHURCHILL WEST	
Operator, Partner	Shear Diamonds Ltd., Stornoway Diamond Corporation
Commodity	Diamonds
NTS	55N/08, 55N/09, 55O/02 – 55O/07, 55O/11, 55O/12
Location	45 km north of Rankin Inlet

Since 2003, operator Shear Diamonds has identified 88 kimberlites within the two project areas. In March 2010, Shear Diamonds announced processing results from the 2008 mini-bulk sample taken at the Notch kimberlite dyke located on its Churchill Property. A 17.26 tonne dry sample returned a diamond grade of 0.862 carats per tonne, including 129 diamonds larger than 1.18 millimetre (mm) in diameter. The five largest recovered stones weighed 0.92, 0.81, 0.77, 0.63, and 0.63 carats. The Notch kimberlite has been reported as a 1.75 m wide vertical dyke trending for more than 3 km along strike.

Results of 150 till samples collected were also recently released and show that 149 samples contain kimberlitic indicator minerals. All of these samples were collected at the heads of previously unexplained indicator mineral trains. These results will assist in further exploration of both the Sedna and Josephine Lake geochemical corridors. Full microprobe results are still pending.

FERGUSON LAKE	
Operator, Partner	Thanda Resources Ltd., Starfield Resources Inc.
Commodity	Diamonds
NTS	65I/09 – 65I/15, 65J/14, 65J/16, 65O/01, 65P/03, 65P/04
Location	160 km south of Baker Lake

Thanda Resources Ltd. and Starfield Resources Inc. conducted ground geophysical and drilling programs in October and November of 2009 in the Y Lake area 20 km south of Ferguson Lake. Thirteen targets selected from the 2009 helicopter-borne survey were further explored by ground magnetic geophysics. Based on these surveys, seven targets were identified for drill testing and the results were released in early 2010. Six targets are interpreted as local country rock containing highly variable magnetite and/or pyrrhotite units. One drill hole intersected a non-diamond-bearing kimberlite dike. A source rock for a diamond recovered during till sampling in 2009 was not identified.

During 2010, Thanda Resources completed a high-resolution airborne magnetic survey totaling 15,558 line-km. This survey will be used to identify kimberlitic targets for exploration during 2011.

NANUQ	
Operator/Owner	Peregrine Diamonds Ltd.
Commodity	Diamonds
NTS	56G/01 – 56G/03, 56G/06 – 56G/11
Location	225 km northeast of Baker Lake

Peregrine Diamonds' 100 per cent-owned Nanuq project covers 315,000 hectares and lies approximately 300 km north of Rankin Inlet. Diamond exploration has been on-going for several years and numerous kimberlite bodies have been located. These bodies include the one-hectare Tudlik, three-hectare Naturalik, and the larger five-hectare Kayuu pipes; after processing, all three bodies were found to be diamondiferous. The kimberlites are late Cretaceous in age (70 to 80 million years) and contain crater-facies volcaniclastic and re-sedimented volcaniclastic kimberlite sequences. In 2008 and 2009, ground and airborne geophysical surveys were completed across portions of the property and lead to the identification of six 'kimberlite-type' drill targets.

The 2010 exploration program began with a 1,550 line-km ground magnetic and electromagnetic geophysical survey across these high-priority targets. Results from these surveys allowed further prioritization with three anomalies selected for drilling. A total of three holes were completed in each body for a total of 492 m without intersecting kimberlite. In addition to the drilling, a total of 495 till samples were collected to follow-up on previously identified geochemical anomalies and to assess the chemistry around new geophysical targets.

Peregrine expects to assess the new information and prioritize new targets for drilling in 2011.

Exploration camp, Nanuq and Nanuq North projects
Courtesy of NWT

NANUQ NORTH	
Operator, Partner	Indicator Minerals Inc., Peregrine Diamonds Ltd., Hunter Exploration Group
Commodity	Diamonds
NTS	56H/02, 56H/03
Location	300 km northeast of Baker Lake

In 2010, Indicator Minerals Inc. completed a drilling program on the 33,100 hectare Nanuq North property. The program was designed to assess the size and geological composition of the NQN-001 kimberlite, as well as determine the diamond distribution within the 1.8-hectare pipe. The program was funded 50/50 between Indicator and Peregrine Diamonds Ltd. with Indicator as the operator.

Six holes were drilled, with intersections of 762 m representing kimberlitic material. At least two phases of kimberlite were identified during the logging of the drill core. The first phase is a strongly magnetic medium-grained phase and the second, a coarser-grained, moderately-magnetic phase. Based on the drilling, the estimated size of this kimberlite is 1.8 hectares. Representative sample material was collected from all drill holes for processing. The kimberlite sample (1,008 kilograms (kg)) yielded 612 diamonds larger than the 0.075 mm sieve size and two diamonds larger than the 0.600 mm sieve size. Kimberlite indicator mineral results from 96 till samples collected in 2010 are pending. Numerous geophysical targets and multiple kimberlite indicator mineral trains have been identified at Nanuq North and remain to be tested.

Hairy lousewort in bloom
Dailey Gibson

QILALUGAQ	
Operator, Partner	Stornoway Diamond Corporation, BHP Billiton Diamonds Inc.
Commodity	Diamonds
NTS	46K/12, 46L/09, 46L/10, 46L/15, 46L/16, 46M/01, 46M/02
Location	10 km north of Repulse Bay, extending across the Rae Isthmus

This 183,000 hectare property lies approximately 10 km north of Repulse Bay and the property extends across the Rae Isthmus to Committee Bay. Prior exploration activities successfully identified 18 kimberlitic bodies, the largest of which is the Q1-4 pipe complex of approximately 14 hectares in size. Various exploration efforts have occurred on the property since the initial discovery in 2001. Geological modeling has demonstrated the possibility of 81 million tonnes of kimberlite to a depth of 330 m, grading 27 to 33 carats per hundred tonnes. However, a NI 43-101 compliant resource estimate has not been identified.

In May 2010, Stornoway Diamonds increased its ownership of the property to 100 per cent by allowing its previous joint venture partners, BHP Billiton, a 3 per cent gross production royalty and a three per cent net smelter return royalty on any products.

During the summer, a 39.5 kilogram (kg) sample from the Naujaat 7 kimberlitic dyke extracted in 2008 was processed. Micro-diamonds recovered from the sample include 17 stones larger than the 0.106 mm sieve size. The company also discovered the Naujaat 8 kimberlitic dyke, a body 650 m long and occurring as a discontinuous series of weathered kimberlite boulders and sub-outcrop. Approximately 70 kg of material was extracted for micro-diamond analysis; microdiamond results are currently pending. This new discovery brings the total of known kimberlitic bodies on the property to 19.

GOLD

AURA CONSOLIDATED GOLD PROJECT	
Operator/Owner	Uranium North Resources Corp.
Commodity	Gold
NTS	65G/13 – 65G/16, 65J/02 – 65J/05
Location	355 km west of Whale Cove

Early in 2010, Uranium North Resources Corp. acquired 13 prospecting permits (236,873 hectares) and two mineral claims (2,090 hectares) covering four prospective areas: AN, F13, Nowyak, and Robin zones. Historical sampling has returned anomalous gold, silver and copper values at all prospects.

Mineralization at the AN prospect is hosted by a five-kilometre lithogical or structural feature of which only a small portion has been evaluated by past workers. At F13 prospect, gold, copper and silver mineralization occurs with iron carbonate altered rocks over a one square kilometre area. Previous assays of chip and channel samples yielded values of 168 g/t Au, 54.51 g/t Ag and 21.4% Cu. A carbonate-pyrite altered shear zone hosts gold and silver mineralization of the Nowyak prospect. The Robin showing is a 60 m by 1.9 km boulder field with restricted outcrop exposure; mineralization is contained in gold-bearing gossanous shear-zones. Historical trenching results returned grades of 18.86 g/t Au, 53.49 g/t Ag and 9.91% Cu.

Field prospecting crew, Aura Gold project.
Courtesy of Uranium North Resources

The objectives of the 2010 program were two-fold: to determine control factors for high-grade gold, silver and copper mineralization at the known showings; and to identify new zones of mineralization in areas where gold anomalies in till samples occur. Mapping, prospecting and sampling were completed over the F13, Nowyak and Robin zones. Prospecting was able to extend the historical zone of mineralization at Robin by 800 m. At F13, a total of 43 rock-chip samples and 223 soil samples were collected. Within the Nowyak zone, a total of 55 rock-chip samples were gathered, and at Robin, 50 rock and 149 soil samples were recovered.

Analysis of six samples returned values between 1.0 g/t to 11.75 g/t Au. A further 36 samples returned anomalous gold. Two samples contained significant copper mineralization, grading 1.9% and 2.2% Cu, while nine other samples contained copper values above the area background values. Other highlights include 16 samples assaying between 1 g/t and 16.2 g/t Ag and four samples returned values of 0.14% to 1.14% Pb. A full review of the geochemistry and complete structural analysis of the property will be completed upon receipt of all assays.

CACHE	
Operator/Owner	Alix Resources Corp.
Commodity	Gold
NTS	55L/07
Location	105 km west of Whale Cove

The 120-hectare Cache property is located on IOL subsurface land approximately 100 km west of Whale Cove, within the Kaminak Greenstone Belt. Exploration has been conducted intermittently on the property since the 1960s. Shear-hosted gold mineralization is identified on the property at the contact between mafic flows and felsic to intermediate tuffs and breccias. Several historical, non-NI 43-101 compliant reserves have been reported for the property.

KIVALLIQ REGION GOLD

The current owner, Alix Resources Corp., announced in May 2010 it was in negotiations with Nunavut Tunngavik Inc. to expand the Cache property to 5,000 hectares. An exploration program was proposed for the 2010 season. No further information was released concerning either the NTI negotiations or an exploration program at Cache.

MALLERY LAKE PROJECT	
Operator/Owner	Uranium North Resources Corp.
Commodity	Gold
NTS	650/09, 650/10, 650/15, 650/16
Location	132 km west-southwest of Baker Lake

The Mallery Lake project was acquired by Uranium North Resources at the start of 2010. The project contains two historical gold showings within the main Mallery stockwork zone; results from grab-sample analyses returned grades of 24.56 g/t Au and 110 g/t Ag. The T-Rex showing, located 4.5 km north of the main Mallery stockwork, has returned historical gold grades of 0.44 g/t within quartz veins 50 m wide and one km long along strike. The underlying geology across the property consists of Proterozoic rhyolitic sequences that are extensively cross-cut by large quartz veins up to 20 m in thickness. Three main gold mineralized zones were identified on surface; the North Central, Eastern and Western zones.

A two-phase exploration program was initiated in 2010. The early season exploration was dedicated to collecting geochemical samples, identifying anomalous auriferous zones and defining drill targets for a possible late-season drill-program. As part of the regional geochemical survey,

Channel sampling
Courtesy of Uranium North Resources

the company collected 53 rock-chip samples, 210 traditional till samples in areas of poor-to-no exposure, and 23 heavy mineral samples to assist in localizing the known gold grains within the till.

The North Central Zone is exposed over an area 150 m by 200 m; within this area, a 0.15 m wide vein returned assays of 33.7 g/t Au and 27.3 g/t Ag. The Eastern Zone has gold-bearing boulders scattered over a 30 m area; this zone lies 250 m east of the North Central Zone. Assays from rock-chip samples include 54.2 g/t Au and 272 g/t Ag. The Western Zone, located 300 m southwest of the North Central Zone, contains lower gold grades with channel samples returning 86 g/t Au and 6.7 g/t Ag over a 2.9 m wide quartz vein.

Based on detailed bedrock mapping, a mineralized zone 700 m by 500 m was identified, coincident with geophysical and soil-geochemistry anomalies. The area to the northwest contains poor bedrock exposure, but this area is considered a high-priority target area for similar vein-type mineralization. Results from the 2010 sampling included 16 regional samples assaying up to 54.2 g/t Au and 272 g/t Ag.

MEADOWBANK MINE	
Operator/Owner	Agnico-Eagle Mines Limited
Commodity	Gold
NTS	56E/04, 66H/01
Location	75 km north of Baker Lake

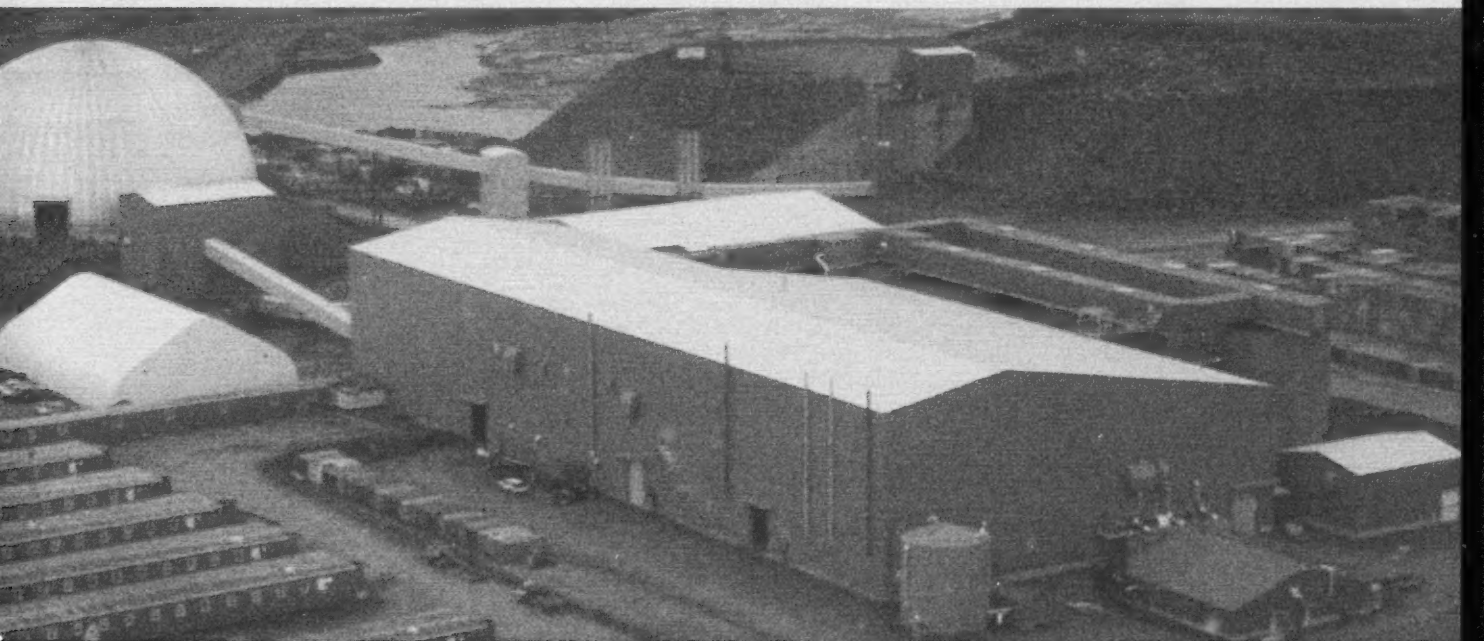
The Meadowbank property was purchased by Agnico-Eagle Mines in 2007. Mine-site construction began in 2008 and was completed in 2010. The first gold bar was poured in February and the mine officially opened in June. The mine has established reserves of 3.7 million ounces of gold (32.2 million tonnes at 3.5 g/t) and is expected to produce 350,000 ounces of gold per year, over a nine year mine-life. Currently, Meadowbank is the only operating mine in Nunavut.

During the first four months of operation, gold production was 96,275 ounces. The plant averaged 6,296 tonnes per day, representing a 92 per cent recovery rate, and mining costs were estimated at $695 per ounce. Production costs are expected to drop once expansions of the pits and plant take place. The estimated production for 2010 is 300,000 ounces. The mine plans to operate year-round with the mill having a peak capacity of about 8,500 tonnes per day. About 25 to 30 per cent of the gold is considered free gold and, therefore, not combined with other minerals. After mining, milling, processing, and smelting, the refined gold is poured as bars containing about 81% gold and 19% silver. Currently Meadowbank pours about eight to ten bars per week. Plans are underway to increase the annual production rate to 400,000 ounces per year. This will be achieved in part with the construction of a secondary crushing facility, estimated to cost $20 million.

Gold at Meadowbank is being extracted from a series of open pits, all within proximity to the processing plant. Current mining operations are restricted to the Portage pit, which is anticipated to produce ore until 2014. Goose Dyke was constructed to enclose the planned Goose Island open pit from the lake. The Goose Island open pit will support gold production at Meadowbank after the Portage deposit is exhausted. Lowering the level of Vault Lake will subsequently allow the Vault open pit further to the north to be started, and mining at Vault is expected to occur between 2015 and 2019.

The geology of the Meadowbank mine comprises Archean-aged volcanic and sedimentary rocks of the Woodburn Lake Group. The Goose Island and Portage deposits are hosted

Mill (foreground) and ore storage (silver dome), Meadowbank mine
Courtesy of CMC



Hauling ore from Portage pit, Meadowbank mine
courtesy of AEM

by magnetite-rich iron formation, while intermediate volcanic rocks host most of the mineralization at the Vault deposit. All the host-zone rock units and associated gold deposits are tightly folded, structurally complex and are situated between regional-scale granitic plutons. The gold is associated with quartz flooding and pyrite and/or pyrrhotite mineralization that has been traced along two regional structural trends – the Meadowbank Trend and the Northeast Trend. The Meadowbank Trend hosts the Goose Island, Portage and Vault deposits, which together make up the current Meadowbank mine plan. The Northeast Trend hosts the PDF deposit on which a full assessment is still underway.

The Portage gold deposit is 2,000 m long and strikes north-northwest; the deposit consists of a regional fold with both limbs extending to the west. Mineralization in the lower limb of the fold is typically six to eight m thick but can be up to 20 m thick within the hinge zone. Goose Island is geologically similar to the Portage deposit and is located 500 m to the south. The deposit has a 750 m-long north-northwest strike, a steep westerly dip, is 10 to 12 m thick, and can be traced below surface to a depth of 500 m. Exploration drilling continued along the southern margin of the deposit, targeting previously unidentified deep-seated mineralization. The Vault deposit, located 3 km northeast of the Portage pit, is a flat-lying and shallowly-dipping body. This deposit has a defined strike length of 1.1 km and the mineralized area has been disturbed by two sets of faults. The main gold-bearing zone is 8 to 12 m thick and the hanging wall lenses are 3 to 5 m thick. Further drilling tested for extensions of the deposit to the north and east.

The resource-drilling program in 2010 was aimed at converting the established gold resource into known gold reserves. Additionally, more regional exploration continued elsewhere on the 39,000-hectare property. This included 17,500 m (103 holes) of drilling along the Meadowbank Trend. These holes were collared to the north of the Vault deposit, and along the western limb; their results add definition to the PDF and Ukalik targets. Other regional work included numerous ground magnetic and IP surveys totaling 175 line-km.

Gold inuksuk, 160.0 ounces gold, 86% pure
courtesy of AEM

KIVALLIQ REGION GOLD

MELIADINE	
Operator/Owner	Agnico-Eagle Mines Limited
Commodity	Gold
NTS	55J/13, 55J/14
Location	25 km northeast of Rankin Inlet

The Meliadine property covers 56,956 hectares, of which 51,198 are comprised of Crown land mining leases, 931 hectares are mineral claims, and 4,827 hectares are Nunavut Tunngavik Incorporated (NTI) land concessions. In December 2009, Comaplex Minerals Corp. consolidated ownership of the former Meliadine East and West properties into the Meliadine project. A group of five gold deposits have been identified within the project area, the largest of which is the Tiriganiaq deposit.

In January 2010, Comaplex released updated resource calculations for Tiriganiaq, Discovery and F Zone, and new mineral resources estimates for the Pump and Wolf zones. Collectively, the Meliadine deposits are estimated to have measured and indicated resources of almost 3.3 million ounces of gold in 12.9 million tonnes grading 7.9 grams of gold per tonne. In addition, the project has 1.7 million ounces of gold in inferred resources (8.4 million tonnes grading 6.4 g/t gold).

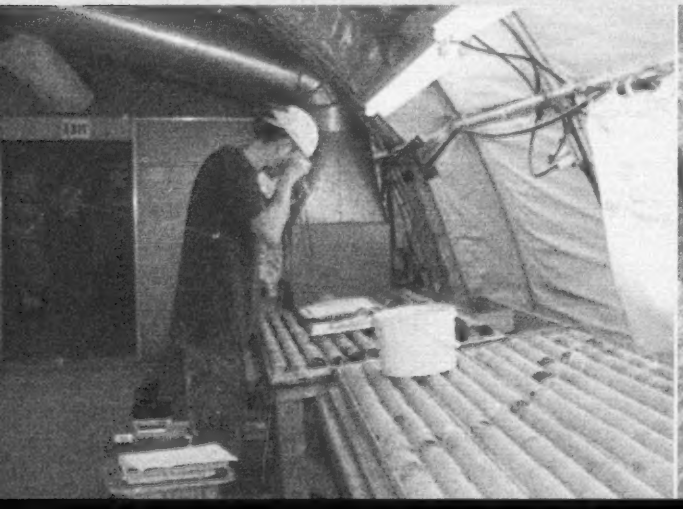
In July 2010, Agnico-Eagle Mines Limited (AEM) entered into an agreement to purchase all outstanding common shares of Comaplex Minerals to acquire the Meliadine project and related Nunavut assets. Comaplex retained other assets and these were transferred to another company, Geomark Exploration Ltd.

Upon the Meliadine purchase, Agnico-Eagle announced plans to accelerate exploration at the site and committed a budget of $130 million over the next two and a half years to move the project towards feasibility. A $62 million exploration program includes 200,000 m of exploration and infill drilling, the latter program designed to upgrade the inferred resources to reserves at Tiriganiaq. The remaining $68 million is budgeted to complete an underground bulk sample from Tiraganiaq, complete a feasibility study, construct an all-weather access road from Rankin Inlet, upgrade camp facilities, and other work related to permitting. Pending receipt of the appropriate permits, road construction is expected to commence in the second half of 2011 and take six months to complete. The underground program is expected to begin in early 2011.

During 2010, $25 million was spent prior to the Agnico-Eagle takeover. Early drilling totaled approximately 20,000 m and included 47 geotechnical drill holes and 44 infill drill holes at Tiriganiaq and F zones. Following the acquisition, AEM began moving heavy equipment into the area and improving logistics.

The geology of the high-grade Tiriganiaq zone comprises a series of sub-parallel gold zones. Infill drilling at Tiriganiaq returned near-surface high-grade results from outside the current known resources; this includes 24.9 g/t Au over 7.8 m and 7.9 g/t Au over 20.4 m. High-grade continuity was

LEFT: Geologist logging core from Tiriganiaq deposit
RIGHT: Folded iron formation, Discovery Zone
Courtesy of NWT



Exploration drilling along Meadowbank trend
courtesy of AEM

also traced to depth as one drill hole intersections returned 7.0 g/t Au over 17 m at 570 m below surface.

Away from the Tiriganiaq Zone, initial results from the F Zone drilling suggest the resources may be expanded further. Drill holes have intersected significant mineralization both near surface and at depth. This included intercepts of 11.4 m at 6.62 g/t Au, 8.2 m at 6.32 g/t Au and 11.0 m at 4.2 g/t Au. AEM considers the entire Meliadine property to have the potential to host significant additional gold resources.

MUSKOX[1], PARKER LAKE[2]	
Operator/Owner	Agnico-Eagle Mines Limited
Commodity	Gold
NTS	56E/02, 56E/03[1], 56M/08, 56M/09
Location	95 km north-northeast of Baker Lake[1], 130 km southeast of Baker Lake[2]

The Muskox project is located 50 km east of the Meadowbank gold mine. A small drill program of 800 m was drilled in eight holes in 2010. Based on results, further work is not planned for 2011.

No exploration was completed on the Parker Lake claims during 2010. However, the company expects to continue its evaluation of the property in 2011.

SY	
Operator, Partner	Corsa Capital Ltd., Kaminak Gold Corporation
Commodities	Gold
NTS	65I/14, 65I/15
Location	250 km west of Whale Cove

The SY gold project covers 101,170 hectares in the Archean Yathkyed Greenstone Belt. Kaminak Gold Corporation owns 100 per cent of the non-diamond rights. Past work resulted in the discovery of at least 20 individual high-grade gold occurrences over a strike length of 30 km. Known mineralization is related to sheared and altered iron formation. Since announcing the 2008 field program, neither Corsa Capital nor Kaminak have reported any results. The tenure has been maintained.

NICKEL/COPPER/PLATINUM GROUP METALS (PGM)

FERGUSON LAKE	
Operator/Owner	Starfield Resources Inc.
Commodities	Nickel, Cobalt, Copper, Platinum, Palladium
NTS	65I/09 – 65I/15, 65J/14, 65J/16, 65O/01, 65P/03, 65P/04
Location	160 km south of Baker Lake

Starfield Resources Inc. undertook field activities in two areas of its Ferguson Lake project during 2010: an area west of the Ferguson Lake deposit, and in the Y Lake area, 20 km south of Ferguson Lake. Reconnaissance sampling and prospecting was undertaken in both areas and five drill holes were completed.

Four drill holes in the Y Lake area tested three electromagnetic conductors with associated sulphide mineralization. Previous sampling had shown two of the conductors to be associated with mineralized areas as elevated metal values of 327 and 10,000 parts per million (ppm) Cu, 2,948 and 4,193 ppm Ag, and up to 2,613 ppm Zn were returned from assay results. A third conductor is associated with a prospecting sample that returned gold values up to 1,991 parts per billion (ppb) and copper values up to 1,806 ppb. Two additional drill holes were collared southwest of the main mineralized zone at Ferguson Lake to test the down-dip extents of the South Discovery Zone. Results from the 2010 drilling program are pending.

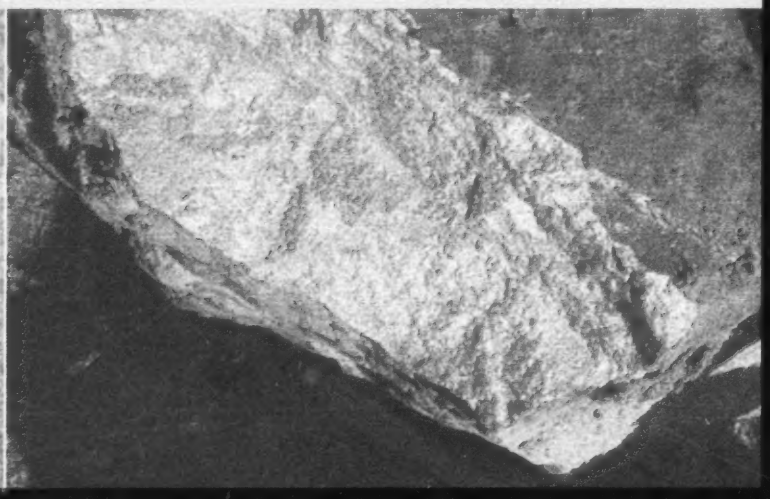
SOUTHAMPTON	
Operator/Owner	Vale Inco Limited
Commodities	Nickel, Cobalt, Copper, Platinum, Palladium
NTS	46B/10, 46B/15
Location	55 km north of Coral Harbour

Vale Inco acquired three prospecting permits on Southampton Island in 2009.

During 2010, Vale conducted an initial helicopter-supported mapping and prospecting program on its Southampton Ni-Cu-PGM project. A campaign of airborne geophysics, surface survey and diamond drilling of selected targets is being considered for 2011.

Geologist examines outcrop on Vale's Southampton Island nickel project
Courtesy of Vale

Pentlandite and chalcopyrite ore from past producing North Rankin Nickel Mine
Courtesy of Vale, EIP



Coral Harbour
Courtesy of NTI

SOUTHAMPTON ISLAND	
Operator/Owner	Anglo American Exploration (Canada) Ltd.
Commodities	Nickel, Cobalt, Copper, Platinum, Palladium
NTS	46B/11 – 46B/14, 46G/01
Location	85 km north-northwest and 55 km west of Coral Harbour

During the summer of 2010, Anglo American Exploration (Canada) Ltd. – a member of the Anglo American plc Group – completed its second field campaign on Southampton Island. The Southampton property consists of 25 prospecting permits and 26 mineral claims, which combined cover an area of more than 415,000 hectares. Six additional prospecting permits were acquired in February 2010.

Exploration activities consisted of prospecting and till sampling over geophysical targets identified from an airborne survey completed in 2009. The field program was based out of the community of Coral Harbour. The project worked with, and had the support of, the local hamlet and the Hunters and Trappers Organization to run training and other safety initiatives (such as polar bear safety and forklift operations) for members of the community. Following these programs, several members of the community worked with the project and were employed as polar bear monitors. Geochemical results from rock and till samples are currently being reviewed.

RARE EARTH ELEMENTS

NUTAAQ	
Operator/Owner	Forum Uranium Corp.
Commodity	Rare Earth Elements
NTS	66A/06
Location	65 km west of Baker Lake

The Nutaaq property is a subsidiary project located within Forum Uranium Corp.'s larger North Thelon project. It is subject to a two per cent net smelter royalty to Nunavut Tunngavik Inc. After re-examination and re-analyses of internal company geochemical databases and samples during 2009, a rare earth element (REE) anomaly was discovered in soil samples originally collected for regional uranium exploration. These samples returned grades of 0.1% to 3.8% total rare earth oxides (TREO).

The local geology of Nutaaq comprises a structurally-bound 10 km by 8 km syenitic body intruded by Hudsonian granites and pegmatites. The REEs are hosted in goyazite (strontium-rich hydrous clay) within the syenite units, where mineralization may be related to alteration or metamorphic regression.

During 2010, detailed sampling and prospecting was conducted across this property to localize and understand the REE-bearing rocks. Two prospective zones were found within the intrusive complex. Widely-spaced samples returned average values of 0.42% to 0.56% TREO and assays up to 7.4% TREO were recovered from localized samples. Further exploration including drilling is planned for 2011.

URANIUM

ABERDEEN, TURQAVIK	
Operator/Owner	Cameco Corporation
Commodity	Uranium
NTS	66A/05, 66A/12, 66B/01, 66B/02, 66B/07 – 66B/10, 66B/13 – 66B/16, 66G/03
Location	85 km west of Baker Lake

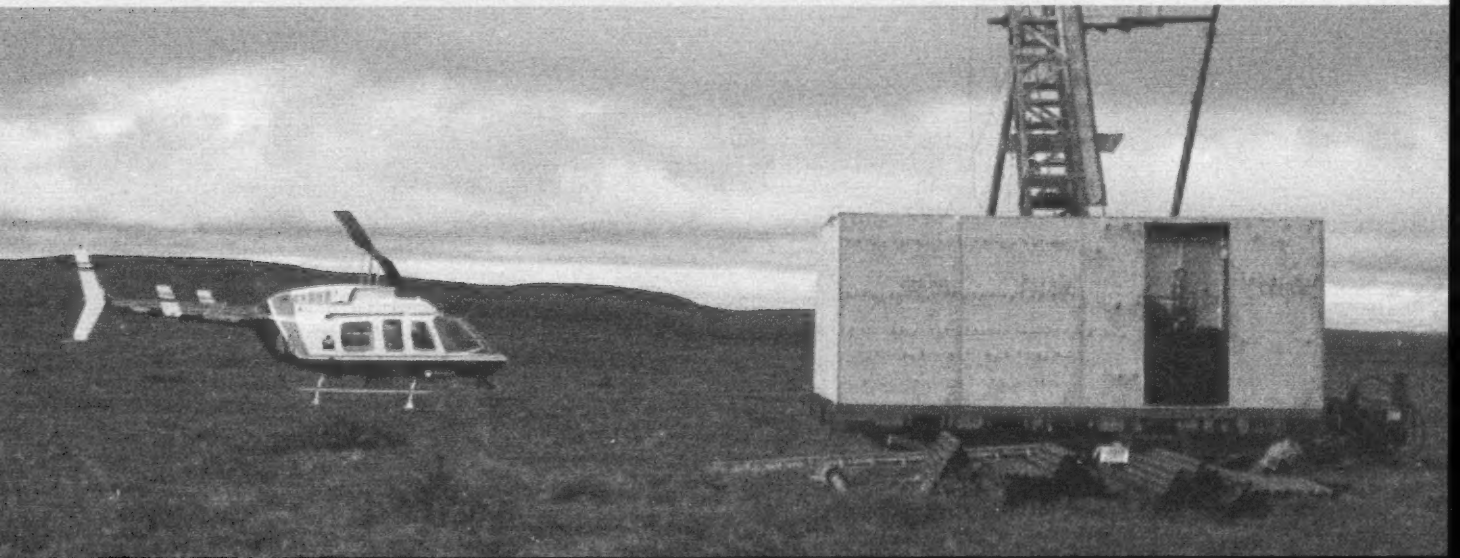
The Aberdeen and Turqavik project areas are located along the eastern margin of the Paleoproterozoic Thelon Basin. Exploration work in 2010 focused on targets in the southern portion of the two areas near the Kiggavik property. The total exploration budget was $6.1 million.

Drilling, ground geophysics and additional ground acquisitions were completed. Thirty-one holes were drilled for a total of 8,810 m and geochemical analyses were conducted on 1,761 core samples. The ground geophysical program included a gravity survey (eight grids and 5,295 stations) and two resistivity surveys (four grids with 25.1 line-km of gradient resistivity survey coverage, and 19.9 line-km of pole-dipole array resistivity survey coverage). Eighteen new claims were staked south of Aberdeen Lake adjacent to the existing Aberdeen project area.

ANGILAK PROJECT (LAC CINQUANTE, YATHKYED)	
Operator, Partner	Kivalliq Energy Corporation, Nunavut Tunngavik Inc.
Commodity	Uranium
NTS	65J/10, 65J/07, 65J/09 – 65J/11
Location	235 km southwest of Baker Lake

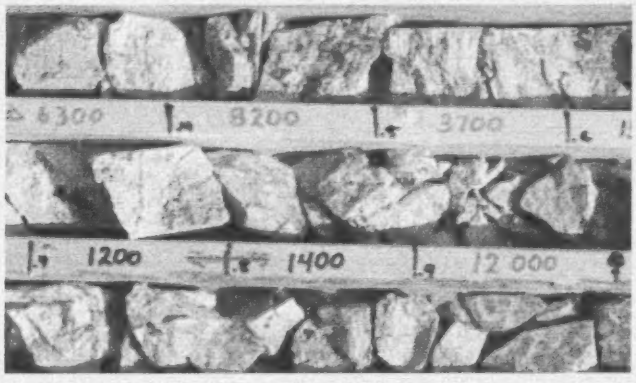
The Angilak project covers 91,054 hectares, a combination of Crown land and IOL subsurface parcels. The historic Lac Cinquante Main Zone is a vein-breccia type uranium deposit occurring within a near-vertical alteration and/or structural zone. The 2009 program confirmed uranium mineralization in a vein-style system to be at least 900 m along strike and recorded to a depth of at least 125 m. The 2010 program consisted of new camp construction, property-wide prospecting, metallurgical and environmental baseline studies, and resource definition and exploratory drilling. A total of 16,700 m of drilling was completed in 107 holes.

Drill shack and survival shack, Aberdeen property
courtesy of TMC



Drilling tested the Main Zone down to a depth of 275 m, and along an east-west strike for 1,350 m. Lac Cinquante remains open in both directions and at depth.

Significant results from the 2010 program include DH-10-LC-003, which had the widest and highest-grade drill intercept to date, assaying at 0.70% U_3O_8 over 13.98 m (estimated true width of 7.6 m) including 1.22 m at 4.68% U_3O_8. Another drill hole intersected a new mineralized zone 500 m west of the deposit. This new zone assayed at 0.21% U_3O_8 over 1.96 m. Other significant intercepts include 2.2 m grading 0.83% U_3O_8; 1.8 m grading 1.60% U_3O_8; 1.8 m grading 0.43% U_3O_8; 1 m grading 2.87% U_3O_8; and 0.5 m grading 2.59% U_3O_8. Infill holes helped delineate high-grade ore shoots within the Main Zone. Outside of the Main Zone, an area returning significant radiometric counts was intersected 1.8 km west of Lac Cinquante, and located within the same rock units as the Main Zone. Multiple radioactive zones were intersected down to 60 m; these zones included breccia, altered basalt, quartz-carbonate veining and a 1.1 m-wide sulphidic tuff hosting Lac Cinquante-style uranium mineralization. Scintillometer peaks of 13,000 counts per second were recorded within the sulphidic tuff zone. Assays are currently pending.



Uranium mineralization in drill hole END09-01, Kiggavik Project
(courtesy of AREVA)

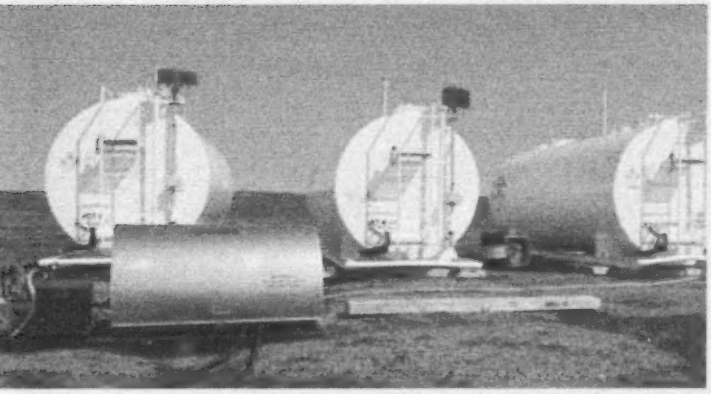
A further eight holes were drilled outside of the modeled historical resource zone, extending the known mineralization 100 m eastward and down to a depth of 125 m. Highlights include intersections of 4.26% U_3O_8 over 0.88 m, grades of 5.7% U_3O_8 over 0.64 m and 5 m of 2.44% U_3O_8. Additional assays are pending and are due late in 2010.

	KIGGAVIK PROJECT (INCLUDING KIGGAVIK, SISSONS, ST. TROPEZ CLAIMS)
Operator, Partners	AREVA Resources Canada Inc., DAEWOO International Corporation, JCU Exploration (Canada) Co. Ltd.
Commodity	Uranium
NTS	66A/05
Location	75 km west of Baker Lake

The Kiggavik project lies 80 km west of Baker Lake and consists of 17 Crown mining leases and 18 mineral claims. The project is operated by AREVA Resources Canada Inc. in a joint venture agreement with JCU Exploration (Canada) Co. Ltd. and DAEWOO Corporation. Three deposits have been identified within the project area; the Kiggavik deposit consists of three mineralized zones (Main, Centre and East), while the Andrew and End deposits, located about 20 km southwest of Kiggavik, are separate deposits related to the same major structure.

Uranium exploration in the Kiggavik area began in the 1970s. In 2007, AREVA initiated a feasibility study and the environmental assessment process. These work components include detailed reviews of the project design and design alternatives along with environmental impacts of the proposed developments.

The Kiggavik deposit is located 2 km south of the Thelon Fault, which is the faulted contact between the Thelon sandstone and basement metasedimentary units. Altered metasediments are the principal host for the uranium mineralization, with lesser amounts of mineralization occurring in altered granite and intrusive rocks. The main uranium mineralization occurs as pitchblende and coffinite in desilicated alteration zones comprised of illite and sericite. Late-stage cross-cutting diabase dykes are not mineralized. The Thelon Fault to the north and the Sissons Fault to the south of the deposit area are thought to create a conduit system for the mineralization. All of the major uranium deposits including Kiggavik and Sissons (Andrew Lake and End Grid) lie along these fault structures.



Kiggavik fuel storage

At Andrew Lake, mineralization is comprised mostly of pitchblende and is lithologically controlled within a shear zone complex. Higher grades of mineralization are located along and next to minor faults and ductile fluid conduits. End Grid is different from Andrew Lake as the former contains local high-pressure zones within the metasediments. These zones are interpreted to have created a highly-faulted region where listric and high-angle normal faults have produced a mineralized horst and graben terrain.

The most recent published geological resource estimates are: Kiggavik containing 40.4 million pounds (lbs) U_3O_8, Andrew Lake containing 59.10 million lbs U_3O_8 and End Grid containing 34.47 million lbs U_3O_8. Collectively, reserves are estimated at 114,052,294 lbs U_3O_8 and would support a 17-year mine-life based on annual production rate of approximately 8 million lbs of uranium (as U_3O_8 yellowcake).

During the 2010 exploration season 9,175.5 m were drilled over the entire property; 14 of these were exploration holes and 13 were delineation and engineering holes. Five drill holes were completed totaling 1,758 m over the Bong Zone. Additionally, a small ground resistivity survey covered the known Bong mineralization and these results will guide future drilling. A geological resource estimate has not been published for Bong.

A total of 14 drill holes were completed in the End Grid area totaling 5,559.5 m. Only three holes were completed at the Andrew Lake deposit totaling 1,084 m while at Kiggavik 672 m were drilled from three collars in the Main and East zones. A further two geotechnical holes were drilled at the proposed Kiggavik mill site to aid in ground investigation studies.

In March 2010, the Minister of Indian Affairs and Northern Development issued a decision for the project to proceed through a Nunavut-led environmental assessment process. This is formally called a Part 5 Review under the Nunavut Land Claims Agreement (NLCA). Public scoping meetings were held by the Nunavut Impact Review Board (NIRB) in all Kivalliq communities during April and May. The NIRB released revised draft guidelines and scope for the environmental impact statement (EIS) in mid-November. The 70-day comment period closes in late January 2011.

Significant environmental baseline work was completed across the property in 2010. Local organizations from Baker Lake and other hamlets were able to tour the exploration site. Twenty local people are permanently employed and another 10 had part-time jobs at the main site or in Baker Lake. Community consultations were held by AREVA at Baker Lake, Rankin Inlet, Coral Harbour, Repulse Bay and Chesterfield Inlet with more than 330 participants.

Exploration and delineation work is due to re-start in June 2011 with a 6,500 m drill program.

	NORTH THELON PROJECT (UKALIK, KIGGAVIK NORTH, KIGGAVIK SOUTH[1]; JUDGE SISSONS, SCHULTZ LAKE[2]; TANQUERAY BLOCK[3])
Operator, Partner	Forum Uranium Corp.[1,2,3], Agnico-Eagle Mines Limited[1]
Commodity	Uranium
NTS	66A/02 – 66A/12, 66B/01, 66B/09
Location	50 km east of Baker Lake

The 245,000-hectare North Thelon project is located approximately 50 km from Baker Lake along the Thelon Basin. In May, the company announced the signing of an agreement with Cash Minerals, whereby Cash could acquire a 60 per cent interest in the North Thelon Property. This agreement was terminated later in the summer and Forum Uranium retained its 100 per cent ownership.

Nueltin Lake area, southern Kivalliq

In late 2010, Forum updated its joint venture agreement with Tanqueray Resources. The Tanqueray property contains the Graphite and RD-7 uranium zones. The original agreement allowed Forum to earn a 60 per cent interest in the Tanqueray block by completing a $4 million program over five years. However, instead of completing the remaining terms under this agreement, Tanqueray agreed to sell Forum a 100 per cent interest in all claims having uranium exploration potential. Further to this deal, Forum offered Tanqueray the right to acquire a 50 per cent interest in any gold exploration program on the newly acquired claims. Tanqueray must elect to exercise this option by paying 50 per cent of the costs of the proposed exploration program, and a new joint venture will be formed with Forum as operator.

Significant exploration occurred on Forum's properties this year and focused on defining and expanding previously identified targets. A till sampling program was completed on the Tanqueray property near the high-grade graphite showing; this 2 km linear anomaly has returned historical assays of up to 1.07% U_3O_8. All 2010 assays are still pending. A ground gravity survey was additionally conducted with more than 3,000 stations across six grids. The company has identified several high-interest targets which will be tested by both diamond drill and percussion reverse circulation drill programs in 2011.

NUELTIN LAKE	
Operator/Owner	Cameco Corporation
Commodity	Uranium
NTS	65B/04, 65C/01
Location	325 km west of Arviat

The Nueltin Lake property consists of 33 mineral claims and one mining lease situated along the contact between the Wollaston Group metasedimentary rocks and the Hurwitz Group low-grade metasedimentary rocks. Uranium and gold occurrences have been identified in the area.

Field programs included drilling, prospecting, mapping and ground geophysical components were conducted in 2008 and 2009. No program was implemented in 2010.

INACTIVE PROJECTS

Diamonds North Resources Ltd. acquired the **Diamonds North Permits** in 2008 adjacent to and west of the Nanuq property, and proceeded to stake claims within two of those permits in 2009. No work has been reported on the property this year.

Uranium North Resources Corp.'s **Amer Lake** project, north of Baker Lake, was inactive in 2010. The company deferred a planned drill program on the property to focus on gold exploration projects in response to the high price of gold. This change in focus also resulted in Uranium North's **Yathkyed** and **South Baker** projects remaining dormant in 2010. Yathkyed is strategically located 20 km south of Kivalliq Energy Corporation's Lac Cinquante project. In early 2010, Uranium North Resources Corp. reported anomalous concentrations of gold recovered from till on its **KAM** project. The project was previously drilled by the company in 2008 as a uranium target. No work was reported on the property in 2010, although it was indicated that planning for a gold exploration program was underway. The South Baker project comprises 12 historic uranium prospects discovered as a result of boulder prospecting. Adjacent to the South Baker project is Ur-Energy Inc.'s **Bugs** uranium project; no work was reported in 2010 but the company continues to maintain tenure on the property.

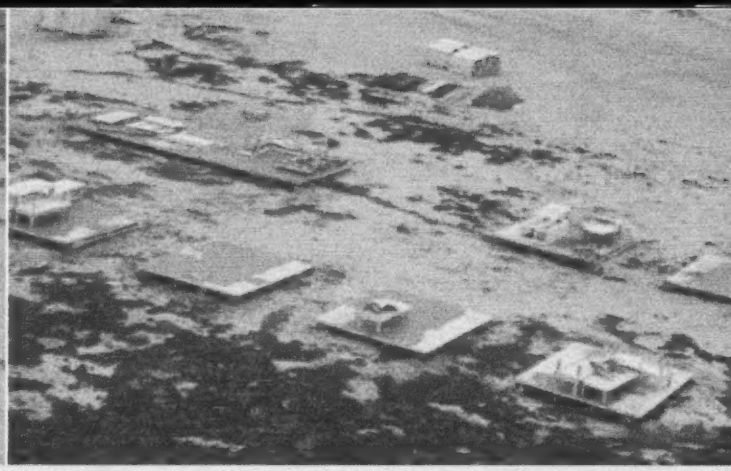
The **Canadian Uranium Joint Venture** is made up of Bayswater Uranium Corporation and Strongbow Exploration Inc. and comprises a number of claim blocks occurring in the Thelon Basin and Amer Group. The claims are located northwest of Baker Lake and are adjacent to a number of other uranium projects. No work was reported on the project in 2010. The **Ruby Hill** project, owned by Ruby Hill Exploration Inc. (a wholly-owned subsidiary of Western Uranium Corporation) also overlies the Thelon Basin. The company is maintaining tenure while determining whether further exploration should proceed on the property. Adjacent to Ruby Hill, the **Garry Lake** property is owned by Uravan Minerals Inc. The company received guidelines for a draft EIS on the property from NIRB in early 2010; no further developments have been reported. The **Thelon Basin** project is controlled by a joint venture between Titan Uranium Inc. and Mega Uranium Ltd.; the project has been on care and maintenance since 2009.

The **Baker Lake Basin** project hosts sediment-hosted, near-surface uranium mineralization and is located southeast of Baker Lake. The property is controlled by Pacific Ridge Exploration Ltd.; it was optioned to Aurora Energy Resources Inc. in 2008 and 2009, but Aurora declined further participation in the project after amalgamating with Fronteer Development Group Inc. Pacific Ridge has indicated that further work on the property will be postponed until uranium prices improve.

The **Kiyuk** gold property is located in the southern Kivalliq, near Nueltin Lake and the Manitoba border. The property is owned by Marcelle Hauseux and Shawn Sumacz, and was most recently optioned to Evolving Gold Corp. No information has been released concerning the property in 2010. West of Arviat, the **Napajut** gold property was optioned by Shear Diamonds Ltd. from Exploratus Ltd. in 2009; Shear has not reported any work on the property in 2010.

Stacked core from drill testing of Lucky 7 target in 2008, Baker Lake Basin project
Courtesy of TSO

Former exploration camp site and stored core, Sand Lake area
(Courtesy of ITSC)



Inactive exploration camp, Itza Lake
(Courtesy of ITSC)

INACTIVE PROJECTS

Number	Project	Operator
DIAMONDS		
489	Diamonds North Permits	Diamonds North Resources Ltd.
GOLD		
546	KAM Project	Uranium North Resources Corp.
547	Kiyuk	Evolving Gold Corp.
548	Napajut	Shear Minerals Ltd.
URANIUM		
684	Amer Lake	Uranium North Resources Corp.
685	Baker Lake Basin	Pacific Ridge Exploration Ltd.
686	Bugs	Ur-Energy Inc.
687 – 690	Canada Uranium Joint Venture (Amer East, Amer West, Itza Lake, Permit 2)	Bayswater Uranium Corporation
691	Garry Lake	Uravan Minerals Inc.
692	Ruby Hill	Ruby Hill Exploration Inc.
693 – 698	South Baker (Hawk, JG, Kam, L1, SW Hawk), Yathkyed	Uranium North Resources Corp.
699	Thelon Basin	Titan Uranium Inc.

QIKIQTAALUK REGION

The Qikiqtaaluk region is the largest administrative region of Nunavut, encompassing an area of 1,040,418 square kilometres (km²). The region consists of many islands including Baffin, Devon, Cornwallis, Bathurst, Ellesmere and all of the smaller islands making up the Canadian Arctic archipelago. Also included within the Qikiqtaaluk region are Melville Peninsula and the Belcher Islands in Hudson Bay.

This region is the most populated region of the three in Nunavut. The territorial capital is the city of Iqaluit which is located on the coast of southern Baffin Island. Other major communities in the region include the hamlets of Arctic Bay, Clyde River, Cape Dorset, Grise Fiord, Hall Beach, Igloolik, Kimmirut, Pangnirtung, Pond Inlet, Qikiqtarjuaq, Resolute Bay, and Sanikiluaq.

The Qikiqtaaluk region is underlain by rocks of the Archean and Proterozoic-aged Churchill, Arctic Platform, Franklinian and younger geologic provinces. As a result of the variability of the rocks, the region is host to a number of diverse mineral deposits and occurrences including diamondiferous kimberlites, hematite and magnetite (iron), base metals, gold, nickel-copper-PGM, and gemstones.

During 2010, several exploration projects were active. Baffinland Iron Mines Corporation's 100 per cent-owned Mary River iron deposit continued to work towards development. Several new high-grade iron occurrences were discovered in 2010. Regional exploration and resource definition have located nine high-grade iron-ore deposits and a recent $433 million takeover bid by ArcelorMittal Group could accelerate this project toward production. Across the Foxe Basin, Advanced Exploration Inc. forged strategic alliances with two major steel and iron-ore consumers in China in order to advance its Roche Bay magnetite iron project. Peregrine Diamonds Ltd., with strategic partner BHP Billiton, completed a large-scale diamond exploration program on its Chidliak Property near Iqaluit. With 52 kimberlites discovered in three years on the property, Hall Peninsula has emerged as a new kimberlite district. Commander Resources Ltd. and partner AngloGold Ashanti Holdings plc also completed large-scale gold exploration along the Malrok and Kanosak trends in central Baffin Island.

The majority (232 of 276) of the prospecting permits issued in 2010 are located in the Qikiqtaaluk region. Peregrine Diamonds acquired 123 permits on Cumberland Peninsula and AngloGold Ashanti acquired 63 permits on Melville Peninsula.

GSC camp on Cumberland Peninsula
Courtesy of GN, EDT

120°W
110°W
100°W
90°W
80°W
70°W
60°W
50°W
40°W
30°W
80°N
70°N
60°N
ARCTIC OCEAN
OCÉAN ARCTIQUE
QUEEN ELIZABETH ISLANDS
ÎLES DE LA REINE-ÉLISABETH
ELLESMERE ISLAND
ÎLE D'ELLESMERE
AXEL HEIBERG ISLAND
758
757
759
939
Blef Ringnes Island
Amund Ringnes Island
Lougheed Island
Cornwall
Graham I.
Seymour Island MBS
Cameron Island
Northern Ellesmere Island Proposed NP
Bjam Martin I.
Grise Fiord
MELVILLE ISLAND
BATHURST ISLAND
Polaris Mine(701)
Cornwallis Island
Resolute
DEVON ISLAND
Devon Ice Cap
PARRY CHANNEL
Prince Leopold Island MBS
Simuttik NP
Bylot Island
Bylot Island MBS
Nanisivik Mine(700)
Pond Inlet
Arctic Bay
Stefansson Island
702
SOMERSET ISLAND
PRINCE OF WALES ISLAND
788
850
787
999
760
852
851
822
Igloolik
Rowley I.
Hall Beach
Taloyoak
Kugaaruk
Wales I.
Umingmaktok
Bathurst Inlet
Repulse Bay
Ukkusiksalik NP
SOUTHAMPTON ISLAND
Coral Harbour
East Bay MBS
Harry Gibbons MBS
Chesterfield Inlet
Rankin Inlet
Whale Cove
Arviat
McConnell River MBS
Qaqsauqtuuq Nunanga TP
Coats Island
Manasi Island
Cape Dorset
Salisbury Island
Nettlingham Island
Charles
Big Island
Resolution Island
Hudson Strait
Detroit d'Hudson
BAFFIN ISLAND
ÎLE DE BAFFIN
Clyde River
Nunatsiaq Proposed NWA
Qikiqtarjuaq
Auyuittuq NP
Auyuittuq Proposed NWA
Akpait Proposed NWA
Prince Charles Island
Air Force I.
FOXE BASIN
Pangnirtung
762
910
761
763
IQALUIT
789
970
819
Kimmirut
Soper Scott MBS
Sherman Bay WS
Qaqsauqtuuq TP
Qaummaarviit TP
Katannilik TP
Sylvia Grinnell Lake TP
Mataliaaq TP
Ogac Lake TP
Soper River TP
Katannilik Proposed TP
Ukkusiksalik TP
Qaqsauqtuuq Proposed TP
Qaummaarviit Proposed TP
Sylvia Grinnell Lake Proposed TP
Mataliaaq Proposed TP
Ogac Lake Proposed TP
Soper River Proposed TP
Katannilik Proposed TP
Ukkusiksalik Proposed

BASE METALS

NANISIVIK MINE	
Owner	Canzinco Ltd. (Breakwater Resources Ltd.)
Commodities	Zinc, Silver
NTS	48C/01
Location	28 km east-northeast of Arctic Bay

The Nanisivik zinc-lead-silver mine closed in 2002; a past producer of 932,635 tonnes of zinc, 15,208 tonnes of lead and 7,564,206 ounces of silver, the mine and surrounding land has been undergoing remediation and environmental monitoring since the mine closure.

River near Nanisivik mine site

POLARIS MINE	
Owner	Teck Resources Limited
Commodities	Lead, Zinc
NTS	68H/08
Location	Little Cornwallis Island, 95 km northwest of Resolute Bay

The Polaris lead-zinc mine officially closed in 2002 after more than 20 years of production. The former mine is located on Little Cornwallis Island, 96 km north of Resolute. Historical figures place the total ore production at 23 million tonnes grading 14.1% Zn. All clean-up and remediation operations are complete. During 2010, the mine was under continual environmental monitoring, a process that will continue until the end of 2011.

STORM	
Owner/Operator	Commander Resources Ltd.
Commodities	Copper, Zinc, Silver
NTS	58C/10, 58C/11
Location	120 km south-southeast of Resolute Bay

In 2008, Commander Resources acquired three prospecting permits on north-western Somerset Island; a fourth permit was acquired in 2010. The permitted land contains the Seal carbonate-hosted zinc-silver deposit and the Storm carbonate-hosted copper deposits. The focus of Commander's work on the property has been copper zones, discovered by

Green and blue copper staining in shattered bedrock, Storm property (courtesy of Commander Resources)

Teck Cominco in 1996. Storm was explored and drill tested by Cominco, and later Noranda, between 1996 and 2001, with grades intersected of up to 5.05% Cu over 53 metres.

A NI 43-101 compliant report was completed in 2009 on the property. However, no resource was defined due to insufficient information from the historic drilling. No work on the property was reported in 2010.

SQ-05	
Owner/Operator	McKinnon Prospecting Ltd.
Commodity	Copper
NTS	33M/14, 34D/02, 34D/03; 34D/06
Location	25 km southeast of Sanikiluaq; 60 km southeast of Sanikiluaq

In 2010, McKinnon Prospecting Ltd. entered into an exploration agreement with Nunavut Tunngavik Inc. (NTI) on two Inuit Owned Land (IOL) subsurface land parcels located on the Belcher Islands in Hudson Bay; the closest settlement to the permitted areas is Sanikiluaq. The two land parcels contain a number of historic showings which have been explored for copper and iron. No information has been released concerning exploration on the properties.

DIAMONDS

AVIAT	
Operator, Partner	Stornoway Diamond Corporation, Hunter Exploration Group
Commodity	Diamonds
NTS	47C/01, 47C/08, 47D/03 – 47D/06
Location	72 km west-southwest of Igloolik

The 177,000-hectare Aviat Project is located at the northern end of the Melville Peninsula. This project has been active for a number of years. In 2008 the joint venture partners announced that the Eastern Sheet Complex – a series of kimberlitic pipes, dykes and sheets – was approximately 260 hectares in size and contained at least 12 distinct multi-phase kimberlite bodies.

Also in 2008, a conceptual geological model was developed that estimated the total kimberlite resource to be between 12.4 and 16 million tonnes with an undiluted diamond grade of 235 +/ – 30 carats per hundred tonnes. Processing results from a 1000 kg mini-bulk sample collected from several bodies in 2008, including the AV-9 pipe, are expected in the near future. No fieldwork was completed in 2009 or 2010 at Aviat. Plans are underway to complete delineation drilling and bulk sampling in order to develop a mineral resource for the property.

CHIDLIAK	
Operator, Partner	Peregrine Diamonds Ltd., BHP Billiton
Commodity	Diamonds
NTS	25O/15, 25O/16, 25P/13, 26A/04, 26A/05, 26A/12, 26B/01 – 26B/03, 26B/06 – 26B/11, 26B/14 – 26B/16
Location	115 km north-northeast of Iqaluit

The Chidliak project is located on the Hall Peninsula of Baffin Island, 120 km north-northeast of Iqaluit. Diamond exploration was the principle area of focus for operator Peregrine Diamonds during 2010. By funding this year's field program, BHP Billiton met the budgetary target of $22.3 million in exploration expenditures necessary to earn a 51 per cent interest in the project. Peregrine Diamonds holds the remaining 49 per cent interest, and will continue as operator in 2011. BHP is currently entitled to increase its control of the project to 58 per cent by solely funding a bankable feasibility study.

Thirty-four kimberlites were discovered in 2010, bringing the total to 50 after three exploration seasons. The company utilized three main methods to discover new kimberlites: prospecting on surface, standard core-drilling, and the use of a percussion reverse circulation drill. This latter drill was used to test high to medium priority geophysical targets and assess the targets for subsequent core drilling. To date, 24 of the discoveries have been made by prospecting and 26 by drilling (18 by core drilling and eight by reverse circulation drilling). Forty-five of the kimbelrites have a land expression and five are under water bodies.

The majority of kimberlites on Chidliak are associated with magnetic high anomalies, although there are exceptions. The kimberlites are often composed of magmatic or volcaniclastic rock and can contain abundant country rock and mantle xenoliths. Kimberlite indicator mineral counts vary and commonly more than one phase of kimberlite is present in the bodies.

In January 2010, results were released from the processing of the 49.6-tonne sample removed from CH-1A kimberlite during the 2009 field season. The sample returned 20.26 carats of commercial-sized diamonds larger than 0.85 mm, giving an overall diamond content of 0.41 carats per tonne. Diamond analysis of the bulk-sample parcel indicated a mix of colour with 55 per cent of the recovered diamonds being white or colourless.

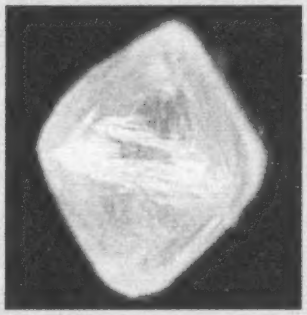
The 2010 field program was completed in two phases – a spring and a summer program. The spring phase included an airborne geophysical survey, drilling on ice and a significant ground geophysical program. The summer phase consisted of drilling high-priority kimberlitic targets using two diamond drills and a reverse circulation (RC) drill, the collection of a mini-bulk sample from CH-6 and CH-7, additional till sampling to determine the presence of kimberlite indicator minerals, ground geophysics and a large-scale prospecting program.

Drill testing anomaly CHI-166, April 2010, Chidliak property

Testing anomalies with an RC drill, Chidliak property

Approximately 20,587 line-km of helicopter-borne magnetic and electromagnetic surveys and 1,800 line-km of ground geophysics were completed. A total of 112 geophysical anomalies were prospected on the ground resulting in the discovery of 15 new kimberlites. More than 400 till samples were collected for the presence of indicator minerals to enhance the current geochemical dataset.

A total of 7,672 m of core was drilled in 48 holes resulting in the discovery of 11 new kimberlites. Eight targets were classified as non-kimberlitic and 19 delineation holes were drilled through known bodies. The reverse circulation drill program was successful with 1,507 m drilled in more than 50 holes. From this work, 34 anomalies were tested, five holes were drilled on known bodies and eight new kimberlites were discovered. Environmental baseline studies were also completed over the property.



0.35 carat diamond from CH-1 mini-bulk sample

The CH-1 kimberlite was tested using the RC drill to aid in three-dimensional geological interpretation. A series of vertical holes were drilled into three magnetic high anomalies associated with the main CH-1 body. Kimberlite was intersected in the holes under a thin veneer of overburden and it is interpreted that the three kimberlites represent distinct lobes of the CH-1 body.

Two mini-bulk samples were completed at CH-6 (13 tonnes) and CH-7 (47.2 tonnes); results are pending from CH-6. Results from CH-7 returned 502 diamonds larger than 0.85 mm, totaling 49.07 carats; this distribution includes 15 diamonds weighing 0.50 carats or heavier, and the four largest diamonds weighed 6.53, 2.18, 1.24 and 0.98 carats.

A coarse diamond distribution was reported from a 238.9 kilogram (kg) surface sample of the CH-28 kimberlite pipe. Work to date shows the kimberlite to be about two hectares in size. The sample contains 174 diamonds larger than the 0.106 millimetre (mm) sieve size, including five diamonds larger than the 0.850 mm sieve size. Of these recovered diamonds, three were described as having an off-white colour, one was grey and one was yellow. The largest diamond was an off-white, 0.11 carat stone.

At five hectares, the CH-31 pipe is the largest kimberlite discovered to date on the property. Processing of an 840 kg sample comprising 452 kg of surficial materials and 388 kg of drill core yielded 233 diamonds larger than the 0.106 mm sieve size. Within these recovered diamonds, five were larger than the 0.850 mm sieve size with the largest being a 1.15 carat off-white tetrahexahedron.

A 312.2 kg sample of reverse circulation drill cuttings collected from the CH-44 kimberlite yielded 910 diamonds larger than the 0.106 mm sieve size, including nine diamonds larger than the 0.850 mm sieve size, for a total weight of 0.45 carats. Caustic fusion results have determined that the CH-19, 21, 23, 35 and 38 kimberlites are also diamondiferous.

Based on results released to date, six kimberlites on Chidliak demonstrate significant economic potential (CH-1, 6, 7, 28, 31, and 44). From geophysical interpretations, at least seven kimberlite bodies appear to be greater than one hectare in size. Peregrine has announced that the 2011 exploration program at Chidliak will be conducted on a similar scale to the 2010 program.

CUMBERLAND, QILAQ	
Operator/Owner	Peregrine Diamonds Ltd.
Commodity	Diamonds
NTS	16D/13, 16D/14, 16E/03 – 16E/06, 16E/10 – 16E/16, 16K/11, 16L/01 – 16L/06, 16L/08, 16L/09, 26H/01, 26H/02, 26H/06 – 26H/11, 26H/13 – 26H/16, 26I/01 – 26I/03, 26I/06 – 26I/08[1], 25O/01, 25O/07 – 25O/10, 25P/03 – 25P/06, 25P/10 – 25P/15, 26A/03, 26A/04, 26A/06, 26A/11 – 26A/13, 26B/12 – 26B/16, 26G/03, 26G04
Location	60 km east of Pangnirtung[1], 110 km east-northeast of Iqaluit[2]

Peregrine Diamond's wholly-owned 1.5 million hectare Cumberland project is located northeast of Pangnirtung on the Cumberland Peninsula of Baffin Island. The project is in a preliminary exploration stage but initial work suggests that the underlying geology may be similar to the nearby diamondiferous Qilaq and Chidliak properties on the Hall Peninsula.

During 2010, Peregrine collected 337 till samples as part of a regional scale geochemical survey from the Cumberland Peninsula to test for kimberlite indicator minerals. Results from the geochemical samples are currently pending.

The 854,000 hectare Qilaq property is located northeast of Iqaluit on the Hall Peninsula, and is 100 per cent-owned by Peregrine Diamonds. A one km buffer zone within Qilaq is subject to earn-in rights by BHP Billiton as part of its joint venture agreement on the adjacent Chidliak property.

During 2010, a 670 line-km airborne magnetic/electromagnetic survey was flown over a small area of the Qilaq property. A total of 12 anomalies were picked from this survey for ground prospecting and geochemical sampling. Two of the 12 geophysical anomalies were classified as high interest, including a magnetic-high anomaly with an estimated diameter of 150 m associated with a 60 m by 50 m topographic depression. Significant kimberlite float was discovered by prospecting; the kimberlite train was named the Q1 kimberlite and contains elevated levels of coarse-grained indicator minerals. At least two phases of kimberlite were visually identified: a more coherent magmatic phase and a weathered kimberlitic breccia. Garnet, picro-ilmenite and chrome diopside crystals over 1 centimetre (cm) in length were also identified. Clasts of limestone, shale and sandstone, all interpreted to be xenoliths, are also abundant.

The Q2 kimberlite is located approximately 4 km north of the Q1 body, and was identified by a till-sampling team. Follow-up prospecting in a nearby topographic depression 80 m in size lead to the discovery of two kimberlite outcrops. Similar to Q1, the Q2 body has two distinct phases – the first, a magmatic kimberlite without limestone xenoliths, the second a phase with coarser-grained indicator minerals and containing abundant limestone xenoliths. Both phases contain olivine, picro-ilmenite, pyrope garnet and chrome diopside macrocrysts.

Results from the bodies released in 2010 demonstrate that both bodies are diamondiferous. A 62.7 kg-sample from Q1 yielded 38 diamonds larger than 0.106 mm sieve size, including one diamond larger than 0.600 mm, and a 241.5 kg-sample from Q2 returned 253 diamonds larger than 0.106 mm, including three diamonds larger than 0.600 mm. A 0.05 carat white to colourless, transparent, distorted single crystal was also recovered from the Q2 body.

Metal anomalies were documented in the Qilaq area from the 2009 exploration season. In 2010, the company completed the evaluation of 23 PGM and gold anomalies. Exploration activities concentrated on ground prospecting and mapping, and the collection of 476 soil geochemical samples and 120 rock-chip samples. Other exploration in 2010 on Qilaq included the sampling of 387 sites for kimberlite indicator minerals. Assays are still pending on all samples.

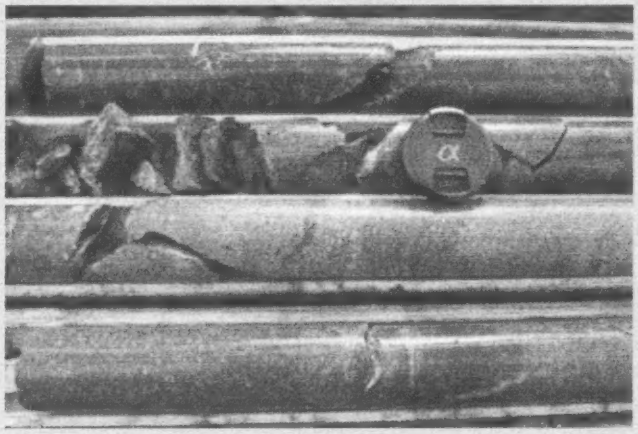
Exploration plans for 2011 include airborne geophysics, ground geophysics, drilling at Q1 and Q2, till-sampling, prospecting and the continued interpretation of the metal anomalies.

GOLD

BRAVO LAKE, QIMMIQ	
Operator, Partner	Commander Resources Ltd., AngloGold Ashanti Holdings plc
Commodity	Gold
NTS	27B/1[1], 27B/121; 27B/12, 37A/07 – 37A/10[2]
Location	220 km south of Clyde River[1]; 250 km south of Clyde River[2]

The 2010 exploration program at the Baffin Gold project was funded by AngloGold Ashanti under the terms of the $20 million farm-in option agreement signed with Commander Resources in 2009. This project consists of mineral claims on Crown land and subsurface IOL parcels (Bravo and Qimiq blocks) covering a 140 km strike-length of Lower Proterozoic volcanic and sedimentary sequences that are host to numerous prospective gold showings.

The 2010 program comprised 5,557 m of drilling in 32 holes at the two main mineralized zones – Malrok and Kanosak (formerly Hébert Zone). At the Malrok showing, drilling targeted the extension of high-grade gold mineralization initially defined in drill holes completed in 2004. The mineralization is hosted in sulphidized silicate iron formation. The most significant drill results from the South Malrok zone returned assays of 7.65 g/t Au over 3.24 m, 5.9 g/t Au over 2.87 m and 2.92 g/t Au over 7.69 m. The mineralized zone is reportedly open down-plunge to the east.



Drill hole KAN-10-05, arsenopyrite and pyrrhotite in conglomerate, Kanosak prospect.

Drilling at Kanosak Prospect

The Kanosak prospect is 4 km by 300 m in size and contains abundant, gold-bearing quartz veins emplaced into the locally altered metasedimentary rocks. Thirteen widely-spaced drill holes drilled over a 2.5 km strike-length represented the first drill-testing of this prospect. Two units with parallel bands of arsenopyrite and gold mineralization were identified. Assay highlights include 2.26 g/t over 9.39 m and 2.16 g/t over 4.21 m.

A regional-scale IP survey was also completed over the northern extension of the Kanosak trend. Results indicate a strongly chargeability body lying in an area currently untested by drilling; this is a priority target for 2011.

The Ridge Lake and Durette prospects were also actively explored during the 2010 season. Drilling at Ridge Lake in 2005 and 2006 encountered significant gold intervals including 21.4 g/t Au over 4.24 m and 10.2 g/t Au over 4.5 m. On the Durette showing, narrow zones of high-grade gold were encountered in a thick, altered iron formation that can be traced on the surface. Detailed geophysical surveys will be conducted over both prospects prior to further drill testing.

Regional prospecting discovered new occurrences of gold mineralization in the Kanosak area. A total of 27 rock-chip samples were taken and analyzed. Six of these samples reported total gold results of approximately 5 g/t, with anomalous samples returning grades as high as 226.3 g/t Au.

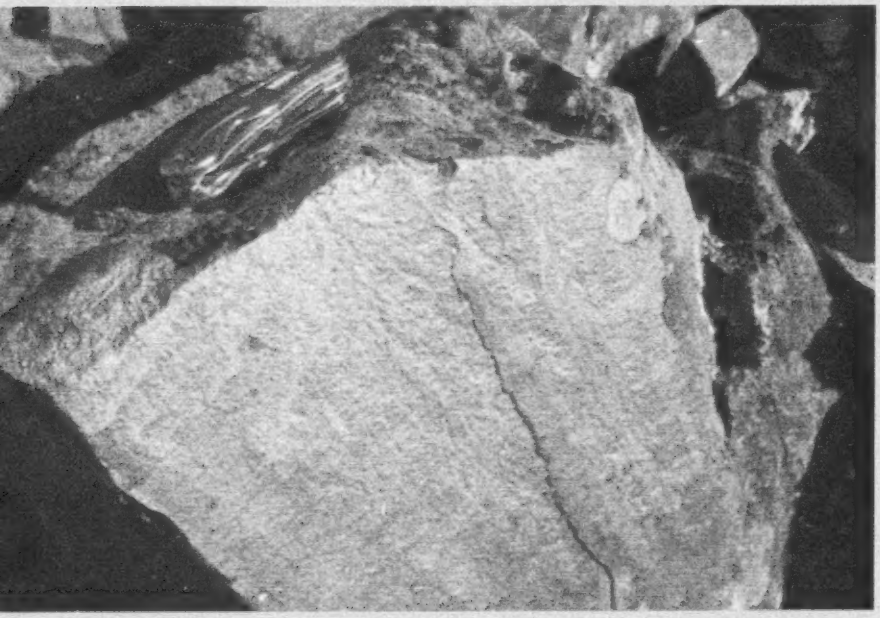
MELVILLE GOLD	
Operator/Owner	AngloGold Ashanti Holdings plc
Commodity	Gold
NTS	46M/12, 46N/01, 46N/06 – 46N/11, 460/03 – 460/08, 460/11 – 460/16, 46P/05, 47A/03
Location	140 km northeast of Repulse Bay

In February 2010, Anglogold Ashanti Holdings plc acquired 62 prospecting permits on the Melville Peninsula. Ground selection was based upon target generation work completed on a regional scale in selected parts of Nunavut during 2009. A number of the permits cover areas with known gold anomalies identified by the Geological Survey of Canada during the 2009 field season and released in November of that year. Helicopter-supported field reconnaissance work has been completed by AngloGold Ashanti and information is currently being interpreted in preparation for more detailed follow-up work.

IRON

MARY RIVER	
Operator/Owner	Baffinland Iron Mines Corporation
Commodity	Iron Ore
NTS	37G/05
Location	160 km south of Pond Inlet

The Mary River iron project is located 936 km north of Iqaluit and has been intermittently explored since its initial discovery in 1962. Until the start of 2010 there were five deposits known at the Mary River site. Deposits No. 1 through No. 4 have been systematically explored; however, Deposit No. 5 was only discovered during the 2009 exploration season. Deposit No. 1 contains proven reserves of 160 million tonnes at 64.4% Fe, and probable reserves of 205 million tonnes grading 64.9% Fe. Deposits No. 2 and 3 contain measured resources of 0.4 million tonnes (at 65.4% Fe), indicated resources of 52.0 million tonnes (grading 64.6% Fe) and inferred resources of 448.0 million tonnes at 65.5% Fe. Deposit No. 5 has yet to be assessed for a resource, however assay results from surface samples grade between 61% and 70% Fe. Successful bulk sampling and subsequent blast furnace-testing in 2009 proved the Mary River ore to be of a world-class quality. Additional metallurgical testing in late 2009 and early 2010 continued to show positive results.



Detail of high grade hematite iron formation outcrop, Deposit No. 5
Courtesy of Baffinland Iron Mines

QIKIQTAALUK REGION IRON

Garnet megacrysts in garnet-amphibolite schist – Deposit No. 1, Mary River

This year, Baffinland completed an extensive exploration and resource delineation program. Early in 2010, drill results from the 2009 exploration program at Deposit No. 1 were released; these holes were the first to define a zone termed the Upper South Limb. Grades of 67.7% Fe over 396 m were returned, upgrading this zone from previously identified waste zone to an inferred resource zone.

In July, the company started a definitive feasibility study to assess a 3 to 4 million tonne per year road haulage operation which would involve removing the bulk iron-ore from the mine-site and trucking it to ships in Milne Inlet. This road operation is being evaluated in addition to an earlier proposal for an 18 million tonne per year operation using a railway line to Steensby Inlet and subsequent port facility. The company is aiming for completion of the draft environmental impact statement (EIS) during the fourth quarter of 2010; this document will include both the rail and road haulage options and would allow completion of a full environmental impact assessment by 2012. If the road proposal is considered viable and the other timelines, including appropriate permitting of the project, are adhered to, the company could ship bulk iron ore to its European markets during the 90-day ice-free window with production beginning as early as 2013.

The 2010 exploration at Mary River comprised 6,802 m of drilling in 44 holes. Thirty-six holes were collared at Deposits No. 4 and 5, while eight holes were drilled at Deposits No. 1, 2 and 3 to test individual anomalies. Results from the drill program include 114.8 m grading 62.6% Fe, highlighted by 61.4 m of 63.6% Fe, in five high-grade zones at Deposit No. 5. A second hole drilled approximately 100 m along strike returned 74 m grading 65.4% Fe in seven mineralized zones, including 68.3% Fe over 30 m. The mineralized zones contain massive specular hematite-dominant mineralization. As is common at other Mary River deposits, the manganese, phosphorous, sulphur and alkali contents of the iron ore is low; these factors are significant considerations in steel production.

Baffinland also announced the discoveries of four new high-grade iron ore zones – named Deposits No. 6, 7, 8 and 9 – all located within 120 km of Deposit No. 1. Grab samples from Deposit No. 6 averaged 67.1% Fe along a northwest-southeast striking high-grade zone exposed over 1 km on surface and up to 170 m wide. The area of exposure corresponds with a magnetic anomaly with a geophysical response area of 4 km by 300 m. Deposit No. 7 was sampled and returned assay grades of 66.1% Fe in mineralization over a surface area of 700 m by 100 m. At Deposit No. 7, a second mineralized zone approximately 1.3 km southeast of the initial discovery is exposed over an area 300 m by 10 m in pervasively altered rocks. Deposit No. 8 lies 95 km southeast of Deposit No. 1. Assays from surface samples taken across two distinct northwest-striking zones returned results of 68.4% Fe with one sample returning a significant high-grade value of 71.4% Fe. These two mineralized zones are 50 m wide, are exposed along strike for 400 m and 600 m, respectively, and lie on one limb of a 10 km-wide regional scale fold. Exploration along the other limb is planned for 2011. Deposit No. 9 is located 120 km east-southeast of Deposit No. 1. Two rock samples were collected from a high-grade exposure and average 70.3% Fe. Further sampling is planned for 2011.

In September 2010, Baffinland Iron Mines was the subject of a hostile take-over bid by Nunavut Iron Ore Acquisition Inc., a wholly-owned subsidiary of Iron Ore Holdings LP. The offer was to acquire all of the issued and outstanding common shares in Baffinland at a price of $0.80 per common share. The Board of Directors and common shareholders of Baffinland rejected the bid as too low. On November 8, 2010, the company announced it had received a competing bid and entered into an agreement with ArcelorMittal S.A. to acquire all of the outstanding common shares of Baffinland: the cash value of the offer is approximately $433 million. The Baffinland Board of Directors and its advisors have recommended that the company's shareholders accept the offer from ArcelorMittal.

	ROCHE BAY[1], TUKTU[2]
Operator, Partner	Advanced Explorations Inc., Roche Bay plc
Commodity	Iron Ore
NTS	47A/04 – 47A/06, 47B/02, 47B/07[1]; 47A/13, 47A/14, 47D/03, 47D/04[2]
Location	72 km southwest of Hall Beach[1], 72 km west of Hall Beach[2]

The Roche Bay and Tuktu iron-ore projects are located on the Melville Peninsula, and are 100 per cent-owned by Advanced Exploration Inc. (AEI). The Roche Bay C-Zone contains an inferred resource of 350 million tonnes at 28.07% Fe to a depth of 250 m below surface while zones A, B and D represent future targets with an existing historical (non-NI 43-101 compliant) combined resource of 700 million tonnes.

During 2010, AEI formed a strategic partnership with XinXing Pipes Group Co., Ltd. (XXP) and an affiliate, whereby the companies agreed to acquire 19 per cent of AEI's current outstanding common shares. The agreement also sets out a joint venture agreement, where XXP will earn a 50 per cent interest in the Roche Bay project (excluding the Tuktu deposit). A separate strategic partnership was formed with Shandong Fulun Steel Company to purchase seven million common shares and a like number of warrants of AEI stock; after exercising all warrants, Shandong Fulun will be entitled to 19 per cent of the total iron ore products from projects other than Roche Bay.

The 2010 field season at both the Roche Bay and Tuktu properties included regional exploration for gold, silver and iron. Significant precious metal exploration occurred and rock-chip samples from across the property returned grades of 1,956 parts per million (ppm) Ag and 0.37% Cu.

AEI acquired additional claims and prospecting permits over possible base and precious metals targets on the Melville Peninsula; 14 claims totaling more than 8,900 hectares were staked for gold, silver, copper, molybdenum and iron ore. AEI now owns an additional 6,070 hectares within the XXP joint venture area, and an additional 56,656 hectares outside. The newly discovered F-Zone is comprised of banded iron formation and is exposed approximately 25 km southwest of the mineralized Roche Bay C-Zone. This new prospect returned assays of 61.3% Fe_2O_3 with low concentrations of contaminants. Eight new claims were staked to cover the high-grade F-Zone. Initial prospecting indicates this zone has a width over 100 m, and has a geophysical signature similar in style to the C-Zone (average width 200 m). A second discovery was made 40 km west of Tuktu, where rock-chip sampling of a magnetite-rich zone returned 52.6% Fe_2O_3. Regional exploration confirmed the presence of banded iron formation over a strike length of 100 km. Three new claims were staked to cover areas from which historical exploration returned grades of 0.14 oz/t Au, 2.48% Cu and 11.56% Mo. Molybdenum mineralization occurs in a showing approximately 600 m by 300 m and returned grades of 4.44% Mo and 7.00% Mo from two chip samples.

Dorset Inuit house with whale bones in foreground, near Hall Beach

AEI plans to initiate a feasibility study on the Roche Bay deposit, to further evaluate the Tuktu deposit in 2011, and to commence multi-commodity exploration across its land holdings.

Helicopter on gossan, Melville Peninsula

NICKEL/COPPER/PLATINUM GROUP METALS (PGM)

CHIDLIAK[2]	
Operator, Partner	Peregrine Diamonds Ltd., BHP Billiton
Commodities	Platinum, Palladium, Lead, Zinc, Copper, Gold
NTS	25O/15, 25O/16, 25P/13, 26A/04, 26A/05, 26A/12, 26B/01 – 26B/03, 26B/06 – 26B/11, 26B/14 – 26B/16
Location	115 km north-northeast of Iqaluit

Exploration within the Chidliak property mainly focused on diamonds. However, Peregrine Diamonds has also identified anomalies of platinum, palladium, lead, zinc, gold, and copper mineralization. Till sampling in 2006 and 2007 resulted in the identification of three distinct anomalies: a sperrylite anomaly (platinum-bearing mineral), a gahnite anomaly (zinc-bearing mineral) and a chalcopyrite anomaly. Concurrent with its diamond exploration activities, the company completed a program of prospecting, geologic mapping and geochemical sampling in 2008. No further work has been reported for 2009 and 2010.

URANIUM

KIMMIRUT	
Owner/Operator	Peregrine Diamonds Ltd.
Commodity	Uranium
NTS	25M/07 – 25M/10, 25M/16, 25N/12, 25N/13
Location	75 km north of Kimmirut

The Kimmirut project, located on the Meta Incognita Peninsula, comprises 16 prospecting permits totaling 268,923 hectares. Peregrine conducted till sampling at Kimmirut in 2007 that identified anomalous concentrations of the uranium-bearing mineral uraninite-thorianite; this work was followed-up in 2008 with further surface exploration. No work has been reported on the property in 2010.

INACTIVE PROJECTS

In 2008, Pure Diamonds Exploration Inc. acquired a 100 per cent interest in the **Baffin Island** diamond project, located on northern Baffin Island, from its former joint venture partner De Beers Canada Mining Inc. The same year, a review of the property was undertaken on the company's behalf by Apex Geoscience Ltd.. This review looked at all exploration results on the property and also included detailed indicator mineral sampling, prospecting and geological mapping. In 2009, the company changed its name to Burnstone Ventures Inc., and underwent share consolidation. The land tenure on this property remains in good standing but no news regarding further exploration has been released.

Two of Indicator Minerals Inc.'s diamond projects also remained inactive in 2010. The **Borden** project is operated in a joint venture agreement with North Country Gold Corp., and is located on the Borden peninsula of northwestern Baffin Island.

Several geophysical anomalies were identified in 2008 for follow-up work and kimberlite boulders were identified while prospecting near geophysical targets. No further work has been reported. Indicator Mineral's wholly-owned **Dorset** project is located on the Foxe Peninsula. The company acquired additional prospecting permits and completed a short field season on the property in 2009, but no further work on Dorset has been reported.

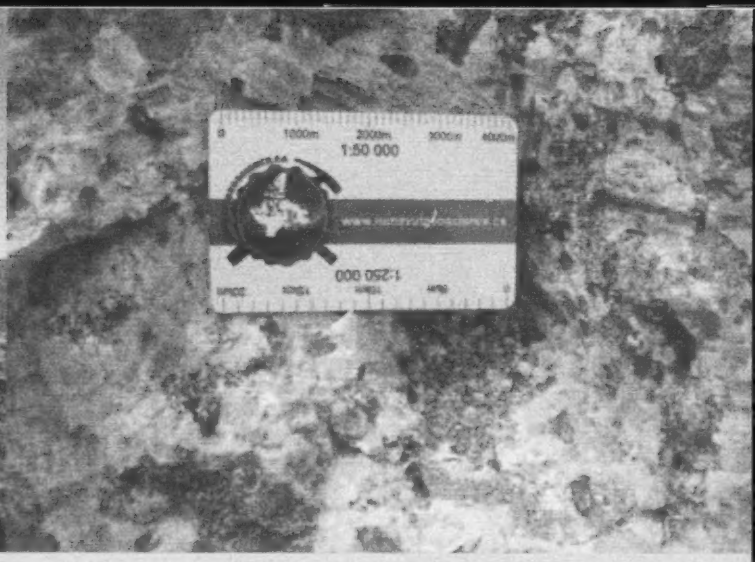
Thirteen coal licenses were granted in 2008 and 2009 to Canadian Sovereign Coal Corp., a wholly-owned subsidiary of Weststar Resources Corp. The licenses are divided among three properties on Ellesmere Island: **Bache Peninsula**, **Fosheim Peninsula** and **Strathcona Fiord**. In 2009, a proposed coal exploration program went to the Nunavut Impact Review Board (NIRB) for screening; the company is awaiting a formal decision from the Minister of Indian Affairs and Northern Development.

In 2008, Uranium North Resources Inc. acquired two prospecting permits on northern Baffin Island near Igloolik. The **Fury-Hecla** property was selected as being in a strategic land position, adjacent to prospecting permits acquired by Cameco Corporation in the Fury-Hecla Basin. Since that time, Cameco has cancelled its permits and Uranium North has not reported on any further work.

True North Gems Inc.'s **Beluga** sapphire project is located near the community of Kimmirut on southern Baffin Island. Since its acquisition in 2003, the company has explored the property for gem-quality sapphire (corundum) mineralization (blue, pink, yellow and colourless). No field work occurred at Beluga in 2010. The company did initiate test sales of a limited inventory of sapphires from the property in conjunction with Alpine Gems.

The **Dome Projects** comprise 13 prospecting permits on Ellef Ringnes, Amund Rignes and Heiberg islands in the high Arctic of Nunavut. The permits were acquired by Saulnier to explore for platinum and palladium, as well as gold, lead, zinc and copper. Exploration on the properties was conducted in 2007; the land tenure is being maintained.

Inuksuk on Melville Peninsula



Blue sapphire, purple diopside, creamy scapolite – Beluga occurrence

INACTIVE PROJECTS

Number	Project	Operator
COAL		
757 – 759	Bache Peninsula, Fosheim Peninsula, Strathcona Fiord	Canadian Sovereign Coal Corp.
DIAMONDS		
787	Baffin Island	Burnstone Ventures Inc.
788	Borden	Indicator Minerals Inc.
789	Dorset	Indicator Minerals Inc.
GEMSTONES		
819	Beluga	True North Gems Inc.
NICKEL-COPPER-PLATINUM GROUP ELEMENTS (PGM)		
939	Dome Projects	Saulnier
URANIUM		
999	Fury-Hecla	Uranium North Resources Corp.

GUIDE TO ACRONYMS

Lithographic "limestone" (dolomite), Bear Island (Coral Harbour)
Courtesy of GN, EDT

GSC Cumberland Peninsula camp
Courtesy of GSC

B Kienlen Prospecting, Amaruk
Courtesy of Diamonds North

CanNor – Canadian Northern Economic Development Agency

CNGO – Canada-Nunavut Geoscience Office

DPA – Development Partnership Agreements

EA – Inuit Owned Lands Mineral Exploration Agreement

EDT – Department of Economic Development and Transportation, Government of Nunavut

EIS – Environmental Impact Statement

EM – Electromagnetic

GEM – Geomapping for Energy and Minerals

GIS – Geographic Information System

GN – Government of Nunavut

GSC – Geological Survey of Canada

IIBA – Inuit Impact Benefit Agreement

INAC – Indian and Northern Affairs Canada

IOL – Inuit Owned Land

IP – Induced Polarization

IPG – Institutions of Public Government

KIA – Kitikmeot Inuit Association

KIM – Kimberlite Indicator Mineral(s)

KivIA – Kivalliq Inuit Association

MRO – Mining Recorder's Office

NGMP – Nunavut General Monitoring Plan

NGO – Non-Government Organizations

NI 43-101 – National Instrument 43-101

NIRB – Nunavut Impact Review Board

NLCA – Nunavut Land Claims Agreement

NPMO – Northern Projects Management Office

NRCan – Natural Resources Canada

NWT – Northwest Territories

NTI – Nunavut Tunngavik Inc.

NTNMR – Northwest Territories and Nunavut Mining Regulations

NTS – National Topographic System

NWB – Nunavut Water Board

PGM – Platinum Group Metals

QIA – Qikiqtani Inuit Association

RC – Reverse Circulation

RIA – Regional Inuit Association

SINED – Strategic Investments in Northern Economic Development

TLUR – Territorial Land Use Regulations

VMS – Volcanogenic Massive Sulphide

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701 Polaris Mine (60)

TerraX Minerals Inc.
248 Needle Lake (36)

Thanda Resources Ltd.
463 Ferguson Lake (diamonds) (41)

Titan Uranium Inc.
699 Thelon Basin (56)

Triex Minerals Corporation (CanTerra Minerals Corporation)
394, 395 Dismal Lake, Dismal Lakes West (35)
396, 397 Kendall River, Mountain Lake (35)

True North Gems Inc.
819 Beluga (70)

Uranium North Resources Corp.
684 Amer Lake (56)
520 Aura Consolidated Gold Project (44)
999 Fury-Hecla (70)
546 KAM Project (gold) (57)
524 Mallery Lake (45)
399 Northern Hepburn (36)
693-698 South Baker (Hawk, JG, KAM, L1, SW Hawk), Yathkyed (56)

Uravan Minerals Inc.
691 Garry Lake (56)

Ur-Energy Inc.
686 Bugs (56)

Vale Inco
611 Southampton (50)

Xstrata plc
101 Gondor (20)
128 Musk (35)

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- Check out the Nunavut Exploration Overview on-line – with interactive maps and helpful search features.
- Explore the Nunavut minerals database (NUMIN).
- Access Nunavut geoscience information – download maps and link to scientific publications and databases.

www.NunavutGeoscience.ca

The most authoritative stop for Nunavut geoscience information.